



INTER-AMERICAN DEVELOPMENT BANK

COUNTRY OFFICE OF HAITI

PROJECT COMPLETION REPORT (PCR)¹

PART ONE

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| PROJECT NAME: | Artibonite Valley Agricultural Development Project |
| SUB-PROJECT | |
| PROJECT NUMBER: | First Stage: HA0018, Second Stage: HA0029 and HA0078 |
| LOAN NUMBER | First Stage: 473/SF-HA and ATN/SF-1467-HA Second Stage: 690/SF-HA, 845/SF-HA and ATN/SF-2152-HA |
| COUNTRY: | Haiti |
| EXECUTING AGENCY(IES): | The Artibonite Valley Development Agency (ODVA); the Central Bank; and the National Cadastral Agency ONACA. |
| SECTOR: | AG-RIE (Agriculture, Irrigation) |
| MODALITY² | Investment |
| DATES APPROVED: | 473/SF-HA = 05-Aug-1976 690/SF-HA = 30-Sep-1982 845/SF-HA = 07-Nov-1990 322/OP-HA = 30-Sep-1982 526/OP-HA = 09-Apr-1991 |
| DATES COMPLETED: | 473/SF-HA = 09-Dec-1983 690/SF-HA = 12-Jul-1993 845/SF-HA = 28-Feb-2002 322/OP-HA = 31-Dec-1989 526/OP-HA = 31-Dec-2002 |
| LOANS AMOUNTS: | 473/SF-HA = \$5,000,000 690/SF-HA = \$17,600,000 845/SF-HA = \$11,550,000 322/OP-HA = \$1,800,000 526/OP-HA = \$1,800,000 |
| FINAL PROJECT IMPLEMENTATION CLASSIFICATION (HS, S, U, VU): | Unsatisfactory |
| FINAL PROJECT ASSUMPTIONS CLASSIFICATION (H, L): | Low |
| FINAL DEVELOPMENT OBJECTIVES CLASSIFICATION (HP, P, LP, I): | Low Probability |

¹ The detailed instructions for completing this report are designed to elicit information about project design and execution in a manner that is consistent with logical framework methodology and the Project Performance Monitoring Report (PPMR) system, of which the PCR is the final output. Please answer all questions that are relevant for the project being reviewed, clearly indicating any questions that are not applicable.

² Investment, global, time-slice, sector, hybrid, reimbursable TC, etc.

PROJECT OBJECTIVES AND COMPONENTS³

In 1976 Haiti had lost its ability to feed itself and the priority was on increasing agricultural output for domestic consumption. At the time import substitution was thought to be fully justified. The Artibonite Valley had been one of the best agricultural areas in Haiti since colonial times and it was an obvious choice in the push to produce food. Modern irrigation infrastructure was first introduced to the valley in 1938 by the United Fruit Company and was subsequently expanded when the EXIMBANK financed the Peligre Dam. The irrigation infrastructure gradually fell into disrepair after the United Fruit Company pulled out and the area was occupied informally by peasants producing food for domestic consumption on very small plots.

In 1976 the Bank approved loan 473/SF-HA (US\$5.0 million) to finance the first phase of a global program. The idea was to increase rice production in the valley by upgrading the irrigation system and helping farmers to increase productivity. Very little was known of the people who inhabited the area, who owned the farms or how large they were. Nevertheless, it was clear that these people were unable to expand output without significant intervention.

The political context was hugely important both for determining the basic design of the program and, for its direct impact on the timeliness and efficiency of project execution. This was one of the few programs financed by the Bank that spanned the full spectrum of Haiti's recent political history. The First Stage was launched in 1976 when the Duvalier dictatorship was at its peak. The Second Stage was launched in 1982 and survived the 1986 populist rebellion that toppled Mr. Duvalier. In 1990 it was expanded under the military government that followed. It was still being executed under Mr. Aristide's subsequent brief democratic government that was interrupted by a military coup in 1991. It then lay dormant during the ensuing international embargo until 1994 when a foreign led invasion returned the elected government to power. This made it possible to re-launch the program in 1995 and it was finally closed in 2002 having exhausted almost all allocated funds.

This PCR mainly focuses on the Second Stage financed with the resources of 690/SF-HA, 845/SF-HA, 322/OP-HA, 526/OP-HA and ATN/SF-2152-HA. Within the Second Stage the primary emphasis is on 845/SF-HA.

The Second Stage began with loan 690/SF-HA and ATN/SF-2152-HA. It was meant to complete works left incomplete by the First Stage and expanded the coverage. However, due to missing designs, devastating political upheaval, cost overruns and execution errors it was not possible to complete the Second Stage without supplementary financing. Accordingly, Loan 845/SF-HA was approved to not only complete the activities started with 690/SF but to improve the executing agency's capacity to manage the system. ATN/SF-2152-HA was expanded and OPEC cofinancing was mobilized to help. This increase almost doubled the financing of the Second Stage to US\$34.3 million.

In addition, in 1990 the Bank approved funds through a separate Road Project (838/SF-HA) to supplement the financing for the Second Stage of the Artibonite Agricultural Program. The second component (US\$3.7 million) of the Road Project was designed to increase the feasibility of the Artibonite Second Stage by rehabilitating and improving six secondary roads (66.4 km) in

³ Throughout the report, the discussion of objectives and components should include the TC element of the project (if any), whether financed under the project itself or under a parallel operation. In cases where the operation was targeted at specific beneficiary groups (such as in Small Projects), those targets should be included among the objectives, components and performance indicators, and reported on accordingly. In the case of sector or hybrid operations, the policy matrix should be substituted for references to Annex A of the loan contract, and the policy measures described in the matrix should be included in the "components" of the project.

the project area. In the end, however, none of the road works in 838/SF-HA slated to support the Artibonite Project were ever executed. In 1995 the road works were shifted to a new project 945/SF-HA. However, when that project suffered cost overruns the Artibonite road works were again shifted to loan 991/SF-HA. That project is pending compliance with prior conditions and could be activated later in 2003.

In 1990 when the supplementary financing was approved (loan 845/SF-HA), the Bank's analytical and decision making tools at the time enabled it to consider the Program as one that would have a very positive economic impact while at the same time concluding that success would still leave the beneficiaries in poverty.

The main problem that plagued the project from its outset was the continuous fragmentation of plots that were already too small to make the culture of extensive products like rice be viable. The strategy followed throughout the program to overcome this problem was to help farmers advance beyond traditional cultivation techniques. The option of consolidating plots was discarded due to political and social obstacles. This decision put the entire onus on the provision of credit, organization of farmer groups, improved seeds, rationalization of land ownership and extension services. Unfortunately, these activities never got off the ground or were either not finished or did not produce the expected results. Millions of dollars were invested without knowing who owned the land whose value was enhanced by the program.

There was an important moment when the Bank had an opportunity to reassess the design of the project while there was still US\$16.0 million undisbursed. However, the Bank's strategy at the time was to shore up the fragile democracy by providing emergency support for economic recovery⁴. The pipeline projects were to spearhead this response. The upshot was that the reformulation was designed to restart the program as quickly as possible. Only physical infrastructure could be advanced quickly while key activities like credit were eliminated and the project got underway without updating the designs and without sufficient funds to complete it.

In the end, most of the funds were finally disbursed but the project was never completed as projected. Political instability, poor governance, a hurricane, cost overruns and the systematic disregard of the non-construction activities combined to leave the Program incomplete, unviable and devoid of any means to ensure durability. Poor maintenance continues, water tariffs are no longer collected, farmer training and organization was passed over, farms were never hooked up to the system, environmental protection measures were never launched, the cadastral survey was never completed, the land rationalization plan was never presented and farm credit never materialized. The long sought after increase in productivity and output never happened.

In conclusion, Haiti's external debt has been increased significantly and its limited institutional capacity has been marshaled over a 26-year period for a program that by itself will probably never achieve its development objectives.

Based on the latest formally agreed-upon statement of project objectives and components (reflected in the most recent version of Annex A of the loan contract and related technical cooperation agreement, if any):

As stated before, the program was divided into two stages financed by 3 Bank loans and two non-reimbursable TC's. However the main focus of this PCR is on the Second Stage and particularly on the activities financed by loan 845/SF-HA and ATN/SF-2152. Loan 690/SF-HA was fully disbursed in 1997.

⁴ Reformulation document, 1995.

A. Briefly describe the project's objectives⁵.**Stage 1: Loan 473/SF-HA**

The First Stage of the project was directed toward a global agricultural development in the Artibonite Valley by the completion and rehabilitation of irrigation systems that covered over approximately 3,600 hectares. The project also aimed at strengthening of the Organization for the Development of the Valley of the Artibonite (ODVA), the institution in charge of promoting agricultural development in the region. The foreseen results were: i) A substantial increase in production of rice: and ii) the introduction and development of other farm crops. The target population was approximately 30,000 families living and working as farmers in the Artibonite Valley.

Stage 2 (a): Loans 690/SF-HA and 322/OP-HA (OPEC co-financing)

The Second Stage was aimed at completing the execution of the first phase and incrementing the irrigated area in the Artibonite Valley by 4,384 net (5,400 gross) hectares; and carrying out supplementary activities that would enable the ODVA to better operate, maintain and manage the Artibonite Valley irrigation district (approx. 32,000 hectares, of which about 20,000 are irrigated).

Stage 2 (b) : Loans 845/SF-HA and 526/OP-HA (OPEC parallel financing)

The object of the additional loans was to complete the Second Stage and improve governance of the irrigation system. It was meant to assist in the development of agriculture in the valley, benefiting small farmers by increasing their yields and output.

B. Briefly describe the project's components⁶.**Stage 1: Loan 473/SF-HA**

1. Infrastructure Works: i) Rehabilitation of 230 km. of the existing primary irrigation canals and of 70 km. of principal drains; ii) rehabilitation of 435 km. of internal roads running parallel to the irrigation canals; iii) repair of minor damage to structures included in the project; iv) construction, replacement or repair of flux control structures; v) construction of pedestrian walks across the canals and vehicular driveways into each irrigation sector; and vi) construction of canal passages and gauging structures.
2. Land Preparation: Development of four 900-hectare nuclei within an area free of salinity and alkalinity problems.
3. Agricultural Extension: Constitution of agricultural agencies in each development nucleus.

⁵ "Objectives" refers to "purposes" as used in the logical framework approach (see Appendix 1). In the case of a program that has more than one objective, succinctly describe the objective of each contributing project.

⁶ "Components" refers to "outputs" as used in the logical framework approach (see Appendix 1). In the case of a program that has more than one objective, succinctly describe the components required to achieve each of the objectives.

4. Supervised Agricultural Credit for technical assistance and seeds to farmers within each development nucleus.
5. Rural Cadastral Survey: Covering an area of about 45,000 hectares.

Stage 2:

Loan 690/SF-HA

1. Infrastructure: i) Rehabilitation of the intake works, consisting of the installation of three sluices in the diversion dam, reconstruction of the siphon across the bed of the Artibonite river and the building of a spillway; ii) Rehabilitation of 26.1 km. of canals, 35.8 km. of drains, and 24.5 km. of access roads; iii) construction of 63 km. of secondary and 162 km. of tertiary canals; iv) construction of 88 large, 7 intermediate and 37 small sluices; 10 culverts, 85 check dams; 27 off-takes; 22 footbridges across the canals, and 50.5 km. of service and maintenance roads; v) land grading on farm plots; and vi) enlargement of the ODVA Administrative Center at Pont-Sondé.
2. Rural promotion and extension: Technical assistance, information and technology transfer, and social welfare services with emphasis on the forming and consolidation of rural associations.
3. Production of improved seeds: Construction of the Seed Center at Bois Dehors.
4. Cadastral survey program: Expansion of the ODVA building at San Marcos to include a cadastral bureau to continue survey of land.

Loan 845/SF-HA

This loan was designed to complete some activities originally financed with 690/SF-HA as well as some additional activities to extend the project area. The activities that carried over from loan 690/SF-HA to the new loan 845/SF-HA were as follows: i) Construction of 63 km of secondary canals and the remaining 100 km of tertiary canals; and ii) rehabilitation of 50.5 km of roads. The full list of all old and new activities to be financed by 845/SF-HA is presented below:

1. Infrastructure and land management: i) Construction of 63 kilometers of secondary canals, facilities for regulating water flow and rehabilitation of 50.5 kilometers of roads; ii) completion of the tertiary irrigation system; and iii) improvement and maintenance of irrigation and drainage canals and of service roads in the additional area of 14,600 hectares). Only the third activity was new.
2. Improvement of canals and roads: This component was comprised entirely of new activities. It included the improvement of the total irrigation system in a surface of 14,600 has. that included the 3,600 has. of the first phase (loan 473/SF-HA).
3. Strengthening of the ODVA: i) Repair of machinery; ii) rehabilitation of workshops; iii) training of personnel; iv) procurement of vehicles for field inspection; and v) improvement of buildings and offices at Pont Sondé. All these activities were new.
4. Agricultural Credit. This was a new activity with respect to 690/SF-HA, however, it was meant to make up for the complete failure of loan 473/SF-HA to provide credit. The component was to be executed by the Central Bank that would wholesale the funds to non-governmental first tier entities that would actually make the loans to

farmers. It was meant to finance production and investment costs for farmers in the Artibonite Valley

5. Cadastral survey: The goal was to complete a cadastral survey of the zone of influence of the second phase (loan 690/SF-HA) with a total land extension of 6.100 ha where topogrametric works were to be performed. Procurement of the equipment necessary and recruitment of the necessary personnel was also included. The component was to be executed by ONACA, the National Cadastral Agency.
6. All the components of loan 690/SF-HA. The supplementary financing could also be used to complete the execution of any of the activities listed in the revised version of Annex A of loan 690/SF-HA. This was a general provision stated in Annex A of loan 845/SF-HA and confirms the interlocking nature of the two loans.

Loan 526/OP-HA (OPEC co-financing)

1. Engineering and administration: supervision of works, administrative activities and recruitment of personnel for cadastral survey;
2. Construction works and facilities: construction of hydraulic structures, on-farm works, repair of buildings and maintenance works;
3. Procurement of machinery, equipment, vehicles, spare parts and furniture required for project works, together with training of operators and mechanics

C. Briefly describe the main assumptions⁷ on which the successful implementation of project components is based, as well as the assumptions on which the overall achievement of project objectives is based.

The project design did not use the logical framework methodology that was implanted several years afterwards by the Bank as a routine in the project preparation process. However in the Project Performance Monitor and Review –PPMR, the following assumptions have been used:

Assumptions related to the implementation of components:

1. The Ministry of Agriculture (MARNDR) would adopt the proposed management and maintenance strategy (study GOPA/SCP/LGL).
2. Organized farmers/water user groups would participate actively and contribute financially in order to achieve a sustainable maintenance of the entire irrigation system.

Assumptions Related to Development Objectives/Purpose:

1. The Ministry of Agriculture (MARNDR) would continue the decentralization process of agricultural services providing appropriate technical assistance to farmers for agricultural intensification / diversification.

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Assumptions refer to external events, beyond the project manager's control, whose non-fulfilment can affect the achievement of project components and/or objectives (see Appendix 1).

2. The MARNDR would develop and enforce a national management water policy in the agricultural sector. A legal framework law would be designed and approved.
3. The process of agrarian land reform would contribute to minimizing land tenure conflicts, and stabilize land property.
4. Farm incomes would improve sufficiently to defray an increasing percentage of the cost of operating and maintaining the irrigation system.

Other assumptions:

1. There would be political stability, timely service of the debt and comparative advantage in producing rice.
2. The political organization and orientation of the farmers in the Artibonite Valley would make it impossible to consider consolidation of plots.
3. Farmers would be willing to and also have the means to obtain credit on a continual basis to finance technological improvements.
4. The objectives of the Secondary Roads component of loan 838/SF-HA would have been accomplished⁸.

PROJECT RESULTS AND DEVELOPMENT OBJECTIVES

A. Based on Section I (A, B, C), succinctly describe:

1. The actual level of achievement of project components.

First Stage: Loan 473/SF-HA

Due to cost increases and the delays caused by political instability, the project's components had to be adjusted downwards from the originally planned goals: The existing network of irrigation canals and principal drains to be rehabilitated was reduced from 230 km. and 70 km., to 60 km. and 14 km., respectively; the network of internal roads running parallel to the irrigation canals was reduced from 435 km. to 115 km; component 2 (Land preparation) was limited to three areas instead of the original four. However, the flux control structures, the pedestrian and vehicle access, the canal passages and gauging structures were delivered as planned.

With regard to agriculture extension, agricultural agencies with offices for credit, garages for the machinery, barns and dwellings for the extension officers were furnished in three of the four sites. The subprograms of agricultural research and seed production were also completed satisfactorily.

With regard to the credit component even though the resources were 100% disbursed, because of the lack of means to run this component on the part of the ODVA, it did not accomplish the desired objectives and in some cases the loans were never recovered.

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This assumption is not explicitly mentioned in this project. However after reviewing the PCR loan 838/SF-HA, there is a clear mention that the success of the latter will make feasible the Artibonite project .

The cadastral survey component was basic for design of the irrigation system. It allowed the development of the irrigation scheme with a minimum of affectations. However the legal subcomponent was never completed due to political situations.

In general terms and with the exception of some minor difficulties, after its reformulation (February, 1980), the project was successful in attaining its goals. Nonetheless, from the financial and institutional standpoints, weaknesses within the ODVA (explained further on) affected the project's effectiveness.

Second Stage:

Loan 690/SF-HA

Component 1 (Irrigation Infrastructure) It was only possible to complete part of the works due to: a) heavy floods that occurred during the project's execution required the rebuilding of some water control structures (cofferdams) at an additional cost of US\$1.4 million, and b) delays in the construction of the canals caused by the revision of initial cost estimates that had been made nearly 10 years prior to actual execution. The completion of access and maintenance roads was only done partially. The construction of 63 km of secondary and 162 km of tertiary canals was completed satisfactorily. However, the intake works; the rehabilitation of 26.1 km of canals, 35.8 km of drains and 24.5 km of access roads; the construction of 88 large, 7 intermediate and 37 small sluices, 10 culverts, 85 check dams, 27 off-takes, and 22 footbridges; and the expansion of the ODVA Administrative Center at Ponte Sonde was completed satisfactorily.

Component 2 (Rural Promotion) was satisfactorily completed. The administrative centers at Lambert, Pelicier, and Benoit designed to provide farmers with technical assistance services, contributed to consolidate farmer's associations. However, additional financing was still needed to provide extension workers with necessary training and means of transportation. The emphasis of the component was on the formation and consolidation of rural associations. This was considered vital to ensure both payment of water rates as well as maintenance of the system. In the end, there is no evidence that any new associations were created as a result of this component. In fact, there is no evidence of any activities that would have directly caused this outcome to be achieved.

Component 3 (Production of Improved Seed) was satisfactorily completed in 1997 with the construction of the Improved Seeds Center at Bois Dehors. However, no follow-up activities have been performed. The rehabilitated rice seed center in Deseaux is still operating under the technical assistance offered by the Taiwanese Mission. In addition, with Cuban assistance, the Government of Haiti (GOH) continues its research work in order to control the rice disease "*paille noire*".

Component 4 (Cadastral Survey Program) The goal of building the National Cadastral Agency (ONACA) building in St. Marc was achieved. Nonetheless, because of social tensions in the valley - where the problem of land tenure is a crucial issue -, the initial ambitious goal to carry out a cadastral survey of 2,100 hectares had to be replaced by a lesser one that comprised the analysis and revision of installed capacities of the ONACA, identifying the needs for equipment, photogrametric services, and recruiting the additional staff required to achieve the originally proposed goal.

845/SF-HA

Component 1 (Infrastructure and land management) was completed satisfactorily except for the completion of the tertiary system that -left to be built and financed by the

Government of Haiti⁹ - never began. All the intended work on the 63 kilometers of secondary canals; on the 50.5 kilometers of roads; and for the improvement and maintenance of irrigation and drainage canals and service roads in the additional 14,600 hectare area were completed satisfactorily.

Component 2 (Improvement of canals and roads) was also completed satisfactorily.

Component 3 (Strengthening of the ODVA) Even though satisfactory in producing the conceptual changes needed to reinforce the ODVA, the necessary steps to restructure and enforce the ODVA have not yet been taken by the government.

Component 4 (Agricultural Credit). The resources allocated for this component were transferred to other categories after the project's reformulation in 1995, which in fact did not explicitly eliminate the component, but left it with no resources and hence, never was implemented.

Component 5 (cadastral survey)- This component instead of helping solve the problems related to land tenure, provoked social tensions. Many people thought that the state was going to steal their land, although the intention was to establish a basis for basic governance, including taxation, protection of property rights, etc. These tensions constituted a significant obstacle to launching the project. The acquisition of equipment and recruitment of personnel was completed, however, the survey was never completed.

ATN/SF-2152-HA

In 1983, the Bank also approved a Non Reimbursable Technical Cooperation (ATN/SF-2152-HA) of US \$1.1 million to reinforce the ODVA. A team of experts was to be hired in the fields of planning, public administration and finance, agro-industry, improved seeds production, cadastral survey and drainage. Total effort was set at 98 months.

When the supplementary financing (845/SF-HA) was approved in 1990, the technical cooperation was reformulated to increase it from US\$1,100,000 to US\$1,593,630. The level of effort was raised to 118 months. One expert in mechanization and one expert in environment were added to the group that no longer needed the services of the experts in agro-industry and improved seeds production.

A second (and last) reformulation of this technical cooperation was approved in 1995, which transformed the technical team into an executive unit in charge of managing the Artibonite project. The TC met its objectives and US\$340,000 (21% of the total) was cancelled in 2002.

The consultants hired by this operation did strengthen the ODVA. However one product of the consultancies was a study recommending the restructuring of the ODVA to transform it into an efficient institution able to manage the hydraulic resources in the Valley. Unfortunately, no efforts were made by the government to implement the recommendations of the study.

⁹ This situation was the result of a trade off with the government during the project reformulation in 1999, which was needed to allocate financial resources to repair some hydraulic infrastructure damaged by hurricane Georges. See section III c. for more explanation.

2. The currently expected level of achievement of project objectives

Unfortunately, due to the shortcomings listed above and despite the partial success in providing some of the infrastructure, it seems unlikely that the project's development objectives will be attained because of the following reasons:

- i) The way the rural promotion component was undertaken has not strengthened the capacity of project beneficiaries to operate and maintain - at least preventively - the infrastructure provided, nor to establish tariffs for the irrigation service that could eventually guarantee the project's sustainability;
- ii) The lack of a tertiary irrigation canal network and of parcel connections has hampered the delivery of water to the production sites;
- iii) The government has not taken the required measures to transform the ODVA into a dynamic institution capable of appropriately managing the water resources in the valley;
- iv) Even though productivity has risen in areas where the water does reach¹⁰, there has not been any significant crop diversification in the zone inducted by the project;
- v) Land tenure, especially the plot sizes, continues to be a problem in the zone that inhibits the production of extensive area crops, such as rice;
- vi) The capacity of farmers to obtain improved seeds and expand production is hampered by the lack of credit.

B. Are there any differences between the current assessment of components or objectives, and the latest formal statement of components and objectives agreed upon with the borrower? If so:

No. There is no difference between the targets for each component, as updated in the last reformulation, and those pursued by the Executing Agency up until the final disbursement of the loan. The only exception is the credit component, which was retained in Annex A of the loan contract but all financing for it was transferred to the construction component.

1. Describe and explain differences between planned and attained results with respect to the components of the project

Loan 845/SF-HA

Component 1: (Infrastructure and Land Management). All work was completed with the exception of the tertiary canals and farm connections.

Component 2: (Improvement of Canals and Roads): All work was completed as planned.

Component 3: (Strengthening of ODVA). All activities were completed as planned.

Component 4: (Agricultural Credit). All financing was removed when the project was reformulated in 1995. Nevertheless the component was retained in Annex A as was the anticipated increase in productivity from access to credit.

¹⁰ Duret et al, 2002

Component 5. (Cadastral Survey). Due to social tensions explained before the activities in this component were ever executed.

2. Describe and explain differences between planned and currently expected results with respect to the objectives of the project.

The object was to complete the Program for Rehabilitation and Expansion of the Irrigation System and Development of Agriculture in the Artibonite Valley, Second Stage, which was financed by 690/SF-HA.

The specific objectives were as follows:

- 616 hectares of land were to be brought under irrigation with the Second Stage, the initial net area of 4,384 hectares was increased to 5,000 hectares. This objective was partially achieved.
- The additional loan was to provide for supplementary activities to enable the executing agency to operate, maintain and more efficiently manage the infrastructure facilities that make up the Artibonite Valley irrigation district. However the institutional capacity to manage the project remains ineffective.
- The additional financing was to have assisted in the development of agriculture in the Artibonite Valley, benefiting small farmers by increasing their yields and output. There is no evidence that yields or output have increased as a direct result of the project.

C. Did the project achieve anything of importance that was unexpected? If so, explain

Yes, it provided a useful test of decentralized execution. The executing agency was the permanent entity, ODVA, in charge of governance of the irrigation system. It had delegated authority from the Ministry of Agriculture for planning and supervision of activities, organization of producers, providing extension services, preparing reports and being the primary interface with the Bank. However the experiment was not successful since the ODVA never had adequate technical staff, the manager had other agendas that often took priority over the execution of the project and there was inadequate accountability for inefficiency.

D. What is the likelihood of achieving the project's agreed objectives and for them to be sustainable? Explain, considering: (i) the degree of completion of the project's components and their use; and (ii) whether the assumptions necessary to achieve the project's objectives are still valid and likely to continue being valid. (Examples of factors that could have an impact on sustainability include: borrower commitment; policy environment; institutional capacity; technical, financial and economic viability; social impact; and incentives for stakeholders to sustain the project).

The likelihood of achieving the objectives on a sustainable basis is very small.

Degree of Completion of components:

- The civil works (tertiary canals) were never completed so the farms were never connected to the new canals. The anticipated increase in productivity and output never materialized and farmers never generated the surplus needed to pay tariffs.
- The financing for the credit component was removed although the component was retained as were the goals of greater productivity and output due to access to credit. This had a direct impact in achieving greater productivity and output.
- The cadastral component was never implemented which has clear negative implications for the capacity of the Government to manage the system.
- The organization of rice producers did not materialize so the expected benefits for payment of tariffs and maintenance will probably not happen.
- The maintenance clause has never been complied with and the infrastructure is currently not being maintained.
- The lack of tertiary canals has pushed farmers to break the secondary canals to get water to their plots.
- The tariff clause was never complied with. Since the Government has less fiscal resources available now than it had at the time of the last reformulation there is little hope for it being able to continue to provide water free of charge.
- Rice is increasingly imported by donors to ease the hunger and impending famine in Haiti. The rice is auctioned to set a 'domestic price' for it. This turns out to be inferior to the price of rice produced in the Project Area. The inability of Artibonite farmers to compete with imported rice has clear implications for the sustainability of the industry.

Validity of Assumptions

Practically none of the assumptions proved to be correct.

- The deconcentration of the Ministry of Agriculture's activities and the increased support to farmers was frustrated by the inefficiency of the ODVA in bringing this about.
- The framework law for water management was never passed.
- The agrarian reform process is stalled.
- The Ministry of Agriculture never accepted the proposed management improvement strategy for the ODVA.
- The price of Artibonite rice has not increased.
- Farmers were never formally organized to maintain the system and they never paid any tariffs.
- Imported rice prices undercut that produced by the project.
- The supplementary road works financed by 838/SF-HA never were executed.

E. In your judgement, are any of the project's objectives unlikely to ever be achieved and if so, why?

The objective of constructing primary and secondary canals and some access roads was achieved. This brought more water into the rice production area, however, it did not lead to the anticipated increase in output and productivity. As a result farm incomes did not rise. There are no cost recovery arrangements and so maintenance is not being carried out. This means that even the limited and informal improvement in access to

water will probably only be temporary. The prospect of completing the project and making it sustainable requires significant additional investment, however, the Government does not have the resources and alternate sources of financing are not available. For these reasons it is unlikely that the main objectives of the project will ever be achieved.

- F. **If the ex-ante analysis of the project included a calculation of the project's rate of return or cost-efficiency analysis, what was the rate of return or what were the cost-efficiency estimates? What is the comparable rate of return, or re-estimated cost-efficiency analysis, after project execution? (Note, recalculation of the project's economic justification should be undertaken in all cases where reliable information is available and where this can be done within the required time frame.)¹¹.**

a) The Original Economic Analysis

The economic analysis for 845/SF-HA calculated two different IRR's. One estimated the economic viability of the additional financing in the context of the original parameters of the Second Stage as established for loan 690/SF-HA. The other estimated the viability of these parameters plus the new activities proposed for loan 845/SF-HA. The IRR for the first was calculated at 13.9% and that for the second was 18.6%.

The program was launched in 1976 as an import substitution initiative. The analysis for 845/SF-HA considered that Artibonite rice could compete successfully with imported rice since import duties were over 50%. Even given inefficiencies in applying these duties it was still thought that Artibonite rice could compete.

The economic analysis assumed that the additional financing would not only arrest the observed decline in output and productivity during the execution of loan 690/SF-HA, but would reverse the downward trend. This was to be brought about by improved technology on farms, access to credit, reversal of the creeping fragmentation of plots, extension services and reliable access to more water for irrigation. The expectation was for an increase in rice production of at least 22,500 tons per year.

Costs: The analysis treated all prior investments in the irrigation system to be sunk costs. However, it seems that it may have treated some investments as sunk costs even though they had yet to be made. For example, the supplementary financing of secondary roads through loan 838/SF-HA was not taken into account neither was the significant contribution from technical cooperation grants. It is even unclear whether the undisbursed portion of loan 690/SF-HA was considered. This had the impact of overestimating the economic viability of the project. The sensitivity analysis showed that a 15% increase in investment costs was sufficient to make the project unviable.

Benefits: The analysis considered the benefits from technological transformation and from credit to be the lynchpins of the project's viability. It was noted that without credit the farmers would not be able to make optimal use of the rehabilitated system and productivity and output would rise significantly less. Since it was not known who held title to the land improved by program investments it was not possible to apportion benefits.

¹¹ If staff of the country office does not have the expertise to undertake this analysis, short-term consultants may be hired (in which case provision should be made in the relevant country office business plan).

Risks: The Loan Proposal for 845/SF-HA explicitly notes that there is an explicit risk within the analysis due to the lack of statistical data with respect to the parameters for the project area. This was noted as being particularly true with respect to time-series in rice productivity and cropping intensity in the project area. This meant that the basis for projected increases in yields was weak.

The economic analysis for 690/SF-HA noted that the resources of the Artibonite Irrigation System had to be rationalized in order to achieve the objectives. A plan was developed but never implemented.

The economic analysis for 845/SF-HA recognized the pivotal importance of the credit component to support the technological improvement without which the project would fail. Given the small size of plots, additional water was not enough, farmers had to improve methods to increase productivity and therefore output. A separate cost/benefit analysis was done that showed the project was not economically viable without the credit component.

Conclusion: The economic analysis for 845/SF-HA ends on a sobering note. It states that it was clear at that time that the average farmer cannot reasonably expect to meet cash needs from producing rice on such small plots. Holdings could not be consolidated since that would displace thousands of people who constituted an organized political force in the region. Since farmers tended to already supplement incomes from rice production with other economic activities the IDB project was not expected to meet the cash needs of the beneficiaries, instead it would just provide a marginal improvement of their lot. Even so, it was considered to be economically viable.

b) An Ex-post Analysis

In 2002 a project impact analysis was carried out by independent consultants hired by the Bank (Duret, P. et al). Using the same parameters and assumptions that were taken into account when calculating the initial IRR of the project, they estimated the IRR at approximately -3%. This result was attributable to three key factors: i) The lack of tertiary canals and parcel connections; ii) the lack of rural promotion; and iii) the execution period that was almost double that intended.

This analysis also found that in those plots located adjacent to the principal canals, where the presence of water increased productivity, incomes rose. This was probably due to the fact that these farmers could get more water by breaching the walls of the secondary canals and constructing informal connections. In addition, they probably benefited from easier access to markets due to the improved roads meant to help maintain the canals. However, on those plots located within the irrigation perimeter, but away from main canals, incomes either stagnated or declined.

Although the original economic analysis concluded that the project was economically viable it was clear that the project was a second best solution.

CHANGES IN THE ORIGINAL OBJECTIVES, COMPONENTS AND ASSUMPTIONS

(a) 1990 –1994 Political Upheaval

A year after the loan was approved in it still had not been ratified due to profound political unrest. At that juncture the democratically elected government was overthrown

by a military coup and all hopes of ratification were shelved as an international embargo was put in place. This drastically altered key un-enunciated assumptions of political stability.

As a result, project execution was delayed for four years. This increased costs, delayed benefits and changed the political dynamics in the project area. The Loan Contract for 845/SF-HA was negotiated with a military government that did not seem able to lead a reorganization of the Artibonite Valley with a view to organizing farmers and consolidating production efforts. This would have created vital economies of scale. When the project was reformulated in 1995, it was ratified by a constitutional government that may have had sufficient credibility among farmers to reorganize rice production. However, no effort to do so was made.

(b) 1995 Reformulation

In 1994 the constitutional government was returned to power through an armed intervention by the international community. The donor community mounted a massive effort to inject funds into Haiti to shore up the fragile democratic process. There was immense pressure for this loan to be activated among the first wave of projects. This context spawned the reformulation in 1995 that sought to remove all obstacles to the immediate activation of the project. The specific changes agreed in the reformulation are shown in the following table.

| Clause | Original Contract | Amended Contract |
|---|--|--|
| 4.02 (a) (i) 1 Legal basis for tariffs | Prior to first disbursement establish legal basis for tariffs. | Clause deleted. Replace with new clause 4.05 (b) |
| 4.02 (a) (i) 2 OPEC co-financing | Prior to first disbursement sign a loan contract with OPEC to provide US\$2,596,000 of the local counterpart | Clause deleted |
| 4.02 (b) Select external audit firm | Prior to first disbursement agree with the Bank on the external audit firm | Clause deleted. Replace with new clause 4.05 (a) |
| 4.03 Readiness to launch credit program | Prior to disbursements under the credit component put all necessary institutional, operational and legislative arrangements in place | Clause deleted |
| 4.05 Other obligations | Clause did not exist | 1. Within 12 months of entry in force agree on the external audit firm 2. Within 18 months of entry in force establish legal basis for tariffs |
| 6.01 (b) Procurement Conditions | Force account is authorized up to US\$6,192,000 | Force account authorization is increased to US \$7,161,000 |
| 6.01 (d) and (e) Procurement Conditions | Clause did not exist | d) Authorized direct contracting for spare parts and tools up to US \$850,000 e) Threshold for international public bidding raised to US \$1'500,000 (works) and US\$350,000 (goods). |
| 6.03 Total program cost | Total program cost was US\$36,266,000 and IDB financing limited to 80.38% | Total program cost reduced to US\$34,112,000 and IDB financing contribution limited to 85.5% |
| 6.04 (a) Additional Resources | Additional resources set at US \$7,116,000 of which US \$2,596,000 could come from OPEC. | Additional resources reduced to US \$4,962,000 and all mention of OPEC is removed |

| | | |
|---|--|--|
| 6.05 Tariff clause (a) | Progressive increase of tariffs to be monitored through financial statements | Clause eliminated and replaced by requirement that Borrower agree with the Bank within 12 months after entry in force of loan contract on a new tariff clause, including specific tariff levels and deadlines |
| 6.08 (b) Support to Executing Agency | All new consultants will be contracted within 24 months of entry in force | Clause deleted |
| 6.09 Ex-post compilation of data and evaluation | a) Present a retrospective intermediate evaluation report within 36 months of entry in force. b) Present the ex-post report 36 months after last disbursement | Clause deleted |
| 6.10 (a) to (d) Execution of the Credit Component | Clauses for positive interest rates, financial reports, progress reports and use of repayments | Clause deleted |
| 8.01 (b) Entry in force of loan contract | Contract must enter into force at least 12 months from signature | Entry in force deadline is May 1, 1995, less than 2 months from signature of reformulation |
| Annex A | The cost table included specific allocation of US\$7,116,000 in local counterpart to different components and set total cost at US\$36,266,000 | Local counterpart reduced to US\$34,112,000 with no allocation to different components and total cost reduced to US\$34,112,000. Credit component removed from cost table but description retained and confirmed |

Ratification: In essence, the reformulation required the urgent ratification of the new contract for 845/SF-HA in less than two months from its signature. Even so, the May 1995 deadline was not met and the loan was only declared in force in August of that year.

Local Counterpart: The new cost table resulting from the reformulation included an amount of US\$4,962,000 in local counterpart. However, it was just a total at the bottom of the table and was not allocated to any activity. This reportedly reflected the decision that local counterpart contributions up to 1995 had been sufficient to consider this requirement as having been complied with.

Co-financing: Also to expedite project start-up it was decided to remove the OPEC co-financing requirement and therefore reduce the total cost. Since it was still expected that OPEC would provide the funds, no steps were taken to adjust project objectives to match the reduction in total cost. This gamble paid off since the additional OPEC financing did in fact materialize.

Credit Component: The complexity of the credit component and the fact that it was to be managed by the Central Bank probably led to its elimination. However, the impact of this decision on expected productivity increases was not analyzed. Annex A retained the description of the Credit Component and objectives were not modified although all financing for credit was eliminated.

Tariffs: The collection of tariffs was central to the sustainability of the project. However, the condition to put necessary arrangements in place was pushed back 12 months and in the end was never complied with.

Executing Unit: Again, in an effort to expedite project start-up it was decided to waive the requirement that additional consultants be contracted within 24 months of entry in force. This led to a significant delay in reinforcing the notoriously weak executing unit.

Mid Term Review and Ex-post Evaluation: It is unclear how elimination of the baseline date, the retrospective intermediate evaluation and the ex-post report expedited project start-up. The baseline data would have provided a tool with which to determine whether development objectives were being met. The retrospective intermediate evaluation would have imposed a very useful pause to assess progress in achieving development impact.

c) Hurricane Georges in 1998

Subsequent to the reformulation, the next significant change to the project occurred in 1998 when Hurricane Georges damaged some important hydraulic structures in the Artibonite Valley (dams, riverside protections, etc.). To respond to this it was agreed that IDB funds earmarked for construction of tertiary canals and parcel connections, as well as part of those for rural promotion would be re-assigned to repair the infrastructure damaged by Hurricane Georges. The agreement was that the Government would finance these investments using its own resources. This decision turned out to be disastrous since the Government had no resources to live up to its commitment and the investments were never financed. This meant main canals were constructed but there was no way to get the water to the farms.

A. In the case of sector or hybrid operations, describe compliance with policy conditionality, answering the following questions for each tranche:

N/A

1. **Were all components (policy measures) carried out in the required time frame?**
2. **Were all components (policy measures) carried out as originally designed in the loan contract?**
3. **If significant changes did occur in the content or timing of components, (policy measures), explain what modifications were made and attach a revised policy matrix highlighting those modifications.**

B. Based on PPMR's presented to headquarters in connection with the Annual Report on Portfolio Management, provide the end-of-year performance classifications for each year the project was in execution¹².

¹² For projects approved prior to the introduction of the PPMR system, complete the information beginning with the year in which the first end-of-year PPMR was presented, leaving previous years blank.

| END OF YEAR PPMR PERFORMANCE CLASSIFICATION | YEARS IN EXECUTION | | | | | | | | | | | |
|--|--------------------|------|------|------|------|------|------|------|------|------|------|------|
| | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
| Development Objectives (DO) [HP, P, LP, I] | | | | | | | | P | L | L | P | P |
| Implementation Progress (IP) [VS, S, U, VU] | | | | | | | | U | U | U | S | U |
| Probability of Assumptions holding true [H, L] | | | | | | | | H | L | L | H | L |

LESSONS LEARNED FROM THE PROJECT

A. Project Design

1. **Were the original objectives of the project (at loan approval) realistically formulated? If not, why not?**

It is probable that the objectives of the Second Stage became more realistic when 845/SF-HA was approved in November 1990. However, at that time, it was already clear that achievement of the objectives would require significant investments and initiatives that were still not included in the project. Moreover, it was known that project objectives could not be achieved without the road works to be implemented through loan 838/SF-HA approved in March 1990.

2. **Were the original (at project approval) components of the project appropriate (i.e., necessary and sufficient) for achieving the project's stated objectives?**

Yes.

3. **Were project assumptions correctly identified and realistically assessed? Were they adequately covered by conditionality in the loan contract to mitigate risks, or by steps to address risks within the design of the project? Were any assumptions omitted that should have been explicitly considered?**

In general terms, some of the project assumptions were correctly identified but their probability was not correctly assessed. There were certain responsibilities delegated to the Ministry of Agriculture and the ODVA that depended very much on their -weak- institutional capacities or on exogenously determined political initiatives. The expectation that the government would have supported the project both politically and financially, turned out to be overly optimistic.

The economic feasibility of the project, dependent on investments to be financed by the secondary roads component of the Road Project (financed with loan 838/SF-HA), probably led the Bank to skew its evaluation of 845/SF-HA. This source of supplemental financing was not even mentioned in the Loan Proposal of 845/SF-HA as an assumption, nor was it part of the economic analysis of the supplementary financing.

4. **Was the planned sequencing of the components adequate?**

The original sequencing was theoretically adequate but it never materialized.

The disbursement period for this specific project was set at five years in order to take account of the inability to do construction during the rainy season. All acquisition of machinery and spare parts was to have been completed during the first two years of execution, as was the construction of offices.

The project was designed such that the rural promotion and institutional strengthening activities were to have taken place in parallel to construction activities. The idea was to put the governance structure in place quickly so as to maximize use of the new infrastructure and ensure its sustainability.

The Loan Contract correctly included safeguards to ensure the project could not move forward unless the arrangements for rural promotion were in place, steps to strengthen the executing agency were launched and the basis for tariff collection was established. Unfortunately, the later reformulation removed these requirements in the interest of expediting construction. The result was the disastrous undermining of the project's sustainability and the efficiency of execution.

5. Was the institutional capacity of the executing agency and other institutions or agencies involved in the program adequately assessed in the project's design? If not, explain.

No. A large part of the shortcomings of the project is related to an overly optimistic assessment of the institutional capacities of the ODVA and of the MARNDR. The limitations of the Central Bank to act as a co-executing agency for the credit component was not adequately assessed. The Central Bank was reluctant to assume this role. The weakness of ONACA seems to have been missed.

6. What aspects of the project's design most contributed to the project's successes and/or failures?

The decision to finance some project activities (road works) through a separate loan that was not even mentioned in the Loan Proposal of 845/SF-HA backfired. None of the road works were ever started.

The decision to have the Central Bank manage the credit component and the operational implications it had probably led to the eventual elimination of the component. The Central Bank was neither equipped for nor interested in the component.

The project was designed around increases in productivity and output on small plots managed by untrained people. The Loan Proposal acknowledges that even if the project were to be totally successful it would still leave some of its beneficiaries below the poverty line. This means that the chances that the tariffs would be paid were small.

The project was designed with a built-in subsidy for beneficiary farmers. The tariffs could not cover all operating and maintenance costs. Since the Government's fiscal resources showed no signs of increasing, it was probable that it would eventually be necessary to approve a Third Stage to rehabilitate and maintain the First and Second Stages.

The design of the project took no account of how the beneficiaries were selected, whether they had title to the land or if they would be willing to work in the context of cooperatives to increase economies of scale. There was only one comment in this regard to the effect that there was no intention to consolidate holdings since it would displace thousands of small farmers who constituted an organized political force in the area.

The design of the institutional strengthening component amounted mainly to the purchase of vehicles and equipment and the rehabilitation of offices. There were also some consultancies to strengthen certain specific functions but they were relatively less financially important and their recommendations were not heeded. The ODVA was meant to not only implement the project but take responsibility for rural promotion, setting and collecting tariffs, reporting, executing significant force account activities, evaluating progress, maintenance and liaison with donors. These functions were to be carried out in a decentralized fashion to enhance flexibility and efficiency. Since these were new functions for the entity it would have been useful to have included in the project a formal review process that conditioned continued support for civil works to specific improvements in the institutional capacity and autonomy of the ODVA.

The project evolved from a project to be executed by the public sector using the labor of squatters into Haiti's most recent agrarian reform experiment. The design of 845/SF-HA, however, did not take this into account explicitly. There is no discussion of the consequences of ownership of the land even though it is assumed that farmers will be not only willing but also able to borrow money to improve the lots they work. Without clear title to the land, it is entirely unclear that farmers would be willing or even able to obtain credit.

The Loan Contract for 690/SF-HA called for the Government to provide any financing necessary to properly operate and maintain the irrigation system. This meant that if tariffs were inadequate the Government had to fill the gap. This condition was not included in the loan contract for 845/SF-HA. The impact was that the system has not been maintained, farmers have not received necessary extension services and no incomplete program activities have been completed.

B. Project Execution

1. What aspects of project execution most contributed to the project's successes and/or failures?

- a) Credit Component:** The decision to eliminate the credit component left the poor beneficiaries without the means to acquire improved seeds and make other improvements to expand productivity and output.
- b) Tertiary Canals:** The decision not to complete the investments needed to connect the farms to the canals had a disastrous impact on the goal to increase productivity and output.
- c) Tariffs:** The failure to make any effort to comply with the tariff clause was probably a pragmatic decision since the project –at the end- did not increase output so that farmers did not have improved means to pay steadily rising tariffs. In addition, although informal, some farmers did gain access to the canals and therefore to more water. Nevertheless, it

was decided to not collect tariffs at the same time that the Government's fiscal budget was shrinking in real terms. This meant it could not continue to provide a 100% subsidy by providing water free of charge to private producers. The project's sustainability was doomed by this decision.

- d) Rural Promotion:** Since no rural promotion was carried out before the primary and secondary canals were built or repaired, no preventive maintenance actions can be expected from project beneficiaries. In addition since neither the tertiary canals nor the parcel connections were ever completed, the water provided through the secondary network cannot reach its ultimate destination. Since water does not reach its final destination, the drainage system is not working properly. Given the fact that the water is not reaching its final destination some of the beneficiaries have dug directly into the walls of the secondary canals – risking the integrity of the whole structure - to access the water that they need. This is a clear reflection of the lack of appreciation of the relationship between farmers and the irrigation system. Furthermore, due to the fact that the beneficiaries were not trained and organized to manage the new irrigation scheme, no tariff system could be established and, hence, the project's sustainability cannot be guaranteed.
- e) Maintenance:** The Bank's inspection visits detected that despite the fact that in some places where some peasants were forced by the situation to perform maintenance activities (otherwise they could have lost their harvests), little or no maintenance was performed on infrastructure constructed or rehabilitated by the project. Also it was noticed that due to the absence of the tertiary and parcel connections, some people had improvised intakes directly from the primary or secondary canals by digging holes in the walls. Moreover, in some of the principal canals, the right of way was not being respected as people, drawn by the new access roads and water in the canals, started building dwellings along the canals. Despite the Bank's expression of concern over these developments, the Government never took measures to correct them. The maintenance clause has never been complied with and no steps have been taken to protect the canals from invasion.
- f) Reformulation:** The decision to not reassess the feasibility of the project during the 1995 reformulation led the Bank to support its activation without key components nor the resources needed to make it a success.
- g) Studies:** Engineering designs for the Second Stage (a specific project) were only completed in 1989 (a full six years after loan 690/SF-HA was approved by the Board). This delayed execution for years and prompted the approval of supplementary financing (845/SF-HA). The designs were updated in 1990, but when the project was re-launched in 1995 they were once again out of date.
- h) Improved Seeds:** A revolving fund was to have been created with the resources of ATN/SF-2152-HA. It would finance the purchase of seeds from seed growers and would be replenished by sales of seeds to farmers. The fund was never established. Most farmers still produce their own seeds.

- i) **Cadastral Survey:** The co-executing agency for this component was the National Bureau of Cadastre -ONACA. There was a specific contractual clause requiring compliance with the goals of the component by a particular deadline. However, the goals were not met.

2. If significant problems arose during project execution, what were these problems and what measures were taken to solve them? Did these measures have the desired impact?

The first big problem that arose was the lack of final designs for the Second Stage. Loan 690/SF-HA was approved in 1983, but designs were not completed until 1988. The TC was used to remedy this situation. This, belatedly but successfully, resolved the problem of missing designs.

When the works for the Second Stage were finally ready to be tendered for bids in 1989 the only two offers tendered exceeded the budget by 57% to 95%. This part of the project was put on hold until more funds could be mobilized and only the force account activities could proceed. Loan 845/SF-HA was approved to bridge the financing gap.

The second significant problem that arose was the military coup and subsequent embargo that froze execution until late in 1995. This hiatus caused the designs to become out of date again. It was evident also that the projected cost of the project had increased beyond the available resources. The Government and the Bank reformulated the project to reduce non-construction activities in an effort to generate more leeway for the construction activities. This did not succeed since the construction was never completed and the removal of the non-construction activities undercut the feasibility and sustainability of the project.

The third noteworthy problem was the hurricane that hit Haiti in 1998. It damaged part of the infrastructure being built and improved by the project. The Government and the Bank agreed to shift IDB financing from the tertiary canals to fix the hurricane damage. This decision was successful in resolving the immediate problem of hurricane damage, but it devastated the project since the tertiary canals were never built and farmers were never hooked up to the new system.

3. Were the Quantity, and timeliness of components delivered under the project satisfactory in comparison with original expectations?

No. The project fell short of its original expectations both in quantity and timeliness of components delivered.

4. If any components have not been completed, what further actions, if any, should be taken to complete them?

It is thought that Artibonite rice can still compete with imports and may even be able to find a niche export market. However, this will require investments in marketing, quality control and propagation of the new strains of rice being perfected with the help of the Taiwanese Government. The latter is the only external donor with a permanent presence in the valley and it has made

significant contributions to the development of world class strains of rice that are well suited to the area.

Even so, rice production in the project area can only be made financially feasible if ways are found to complete the infrastructure component and farmer's productivity and output are improved. The main constraint in this case is the small size of the plots and the fact that they are shrinking. To increase the welfare of farmers, it is necessary to stop the fragmentation of plots and rationalize land use. This may entail either mixed cropping solutions or consolidation of holdings to produce rice. The latter option need not be through the removal of current farmers. It may be possible to achieve it by organizing them into producers' cooperatives.

It seems that the only way to successfully recover the investment made in this project is to place the emphasis on increased output and improved living conditions not on completion of physical works. The Government will have to commit itself to a governance approach based on transparency and efficiency. Private partners will have to assume responsibility for marketing. Incremental investments will have to be conditional upon the timely and consistent response of the farmers to pay tariffs. Payment of tariffs should guarantee farmers of timely and sound service. This requires a level of vision, credibility and management capacity that is not evident at this time.

C. Borrower/Executor¹³ Performance

1. **How well did the Borrower/Executor perform throughout the execution phase of the project? (For example were financial arrangements and procurement carried out effectively? Did the executing agency coordinate effectively with other institutions? Did it have efficient information systems for project execution and monitoring? Did it use this information to improve project management? Did it have an effective analytical and decision-making capacity? Did it identify problems in a timely manner and expeditiously take action to solve them?)**

a) Procurement

- i) International Competitive Bidding: The construction contract for the works financed by 690/SF-HA was tendered for bid in 1989, but had to be withdrawn when the bids were 57% to 95% over the estimated budget. The designs were hopelessly out of date. Once the designs had been re-done and additional funding through 845/SF-HA was available the procurement exercise was blocked by the suspension of the project until appropriate authorities were in place to ratify it. Bids were finally launched in 1995 after the project had been reformulated and the loan had been ratified. Unfortunately, the designs had not been updated since 1989.
- ii) Force Account: The 1995 reformulation authorized the Executing Agency to use up to US\$7,161,000 of the loan resources to finance force account activities. However given that this was not reported on by ODVA and not

¹³ Incases where a specialized agency (UNICEF, UNDP, etc.) was utilized, comment on that agency's performance as well as performance by Borrower/beneficiary agencies.

monitored by the Audited financial statements, there is no way to determine the final amount invested via this modality.

- iii) Direct Contracting: The 1995 reformulation also authorized the Executing Agency to use up to US\$850,000 of the loan resources for direct purchasing. However given that this was not reported on by ODVA and not monitored by the Audited financial statements, there is no way to determine the final amount invested via this modality.

b) Financial Arrangements:

- i) Local Counterpart: The 1995 reformulation reduced total project costs by almost US\$2.0 million to US\$34,112,000. This increased the Bank's financing from 80.38% to 85%. The Local Counterpart was set at a global figure of US\$4,962,000 without any allocation to specific project components. The new cost table just showed this amount at the bottom of the local counterpart column. This apparently reflects the determination that eligible investments by the Government up to that point exceeded this amount.
- ii) Additional Funds: After Hurricane Georges damaged some of the irrigation infrastructure it was decided that the Bank financing earmarked for the tertiary canals and farm connections would be diverted to repair the damage and that those activities would be instead financed by the government. At the end, due to budget constraints the Haitian Government did not build the tertiary canals nor the farm connections.

The Second Stage sought to avoid a situation in which the infrastructure was upgraded but benefits were stymied by lack of proper maintenance or insufficient funds to operate the system. Accordingly, the loan contract for 690/SF-HA included the requirement that the Government provide sufficient resources for the proper operation and maintenance of the irrigation system as a whole. This was to complement the money collected through tariffs. The financial statements did not report on this condition nor did the progress reports so it is not possible to determine if it was complied with.

- iii) Audited Statements: The Loan Proposal for 845/SF-HA established that each of the co-executing agencies (ODVA, ONACA and the BRH) should present separate audited financial statements. However, the loan contract only requested one set of financial statements for the project as a whole given that it was subsequently decided to let the ODVA have exclusive responsibility for financial transactions. There were severe problems throughout execution to obtain the audited statements and they were always late. The recommendations in the audits were not implemented. The Loan Proposal for 845/SF-HA required the presentation of the audited financial statements for the project for ten years after the last disbursement. This has not been respected. The audited financial statements for fiscal year 1999/2000 have not yet been submitted to the Bank.
- iv) Revolving Fund: The ODVA was notoriously slow in justifying advances. Once justifications were presented they often contained errors that had to be corrected. This reflected the weakness of the executing agency. The frequent errors and consequent rejection of requests eventually constituted a source of institutional discomfort between the Bank and the ODVA.

- v) Debt Service: After the 1995 reformulation the fiscal crisis grew throughout the rest of project execution. This led to several interruptions of execution due to problems servicing Haiti's stock of debt with the Bank.

c) Other Contractual Conditions

- i) Tariffs: According to the Loan Proposal the audited financial statements would be the vehicles for monitoring compliance with the tariff clause. There is no evidence that this ever happened. However after the reformulation this condition was waived and replaced by the necessity to establish, within 12 months of the date of signature of the modificatory contract, a new tariff clause between the Bank and the Borrower. There is no evidence of any effort by the Executing Agency to comply with this new contractual condition. The amount of any tariffs collected and the use they were put to is unknown.
- ii) Maintenance: The loan contract included a maintenance clause that was never complied with by the Executing Agency. There is no documented evidence of any effort by the Executing Unit to comply. As a result the status of the assets financed by the Bank is unknown.
- iii) Progress Reports: These reports gave no information on changes in productivity or output. None of these reports provided any information on any efforts by the Government to mobilize additional resources to complete the civil works. There is no mention of tariffs and a total silence as to routine maintenance activities.
- iv) Cadastral Register: The loan contract included a condition requiring compliance with the goals of the cadastral component. However, the goal was not met and there is no documented evidence of any effort by the Executing Agency to comply with this contractual condition or implement the component.

d) Management and Mission

Since the First Stage, the ODVA did not have sound management information systems, its administrative capacity was weak and its technicians were often under qualified. Despite continuous technical assistance there has been no lasting improvement in these areas. This meant that it did not have an effective basis for planning activities, anticipating problems and providing solutions. The negative implications for project execution are clear.

It seems that the lack of a clear mission for the ODVA diluted its effectiveness. The Artibonite initiative became the testing ground for a new agrarian reform process. The initiative has stalled and there has never been clearly enunciated government strategy in this regard. With respect to the immediate responsibility of the ODVA, the management of the irrigation system, it seems it is facing a situation in which little or no organization of producers has been achieved, no system for cost-recovery has been established, no resources are available to maintain the system, transfers from central government to operate the system at a 100% subsidy are increasingly hard to come by, there is no system for assisting farmers to purchase improved seeds, the ODVA's resources are so strapped that they cannot provide a significant level of extension services and no culture of transparent reporting has

been put in place. As a result, its credibility among farmers has suffered. These weaknesses also affected the capacity of the ODVA to work effectively with other public or non-public entities.

The communications between the executing unit and the Bank were often difficult because of the physical distance and due to the lack of a good public communication system (telephones, fax, e-mail, etc.) available at the ODVA. Also because of the distance and the lack of managerial capacities the disbursement requests were often poorly prepared, lacked the needed support documentation, and took several weeks to be signed by the local authorities before they were sent to the Bank for review.

2. How well did the Borrower/Executor utilize staff and consultants in this project? Were the consultants' inputs and recommendations appropriate and effective, and were they used by the Borrower/Executor?

In most of the cases the consultants' recommendations were appropriate. However, some of them called for actions and decisions at higher authority levels that were never taken. Therefore, in these cases, the anticipated results were not achieved. This is particularly true in the case of the management structure of the ODVA. Several consultants over the years have recommended the reform of the ODVA to make it more effective and transparent. No reform has been implemented.

3. Did the Borrower/Executor's relationship with the other institutions or agencies involved in the project have any significant impact on the outcome of the project? What was the impact?

No. Indeed, the lack of good relationships between the ODVA and other institutions and organizations produced several shortcomings in the project, and more than one tense situation. The relationship with the ONACA was never fluid and the loan resources were never provided to ONACA directly. The ODVA took charge of paying suppliers and contractors who provided goods and services to ONACA.

However, the relationship between the Government of Haiti and Taiwan was instrumental in providing the only significant advance in improving seed quality, combating diseases and running pilot plots successfully.

4. Did the Borrower/Executor significantly improve its institutional capacity during project execution? If yes, explain. If not, why not?

No. Any improvements in institutional capacity cannot be characterized as significant and they were not lasting. As external consulting services were completed (engineers, consultants, and workers), the execution agency's institutional capacity steadily deteriorated until it returned to its previous condition with little permanent improvement. Specific recommendations by consultants and by the Bank to bring about lasting improvements in the institutional capacity of the ODVA were not implemented by the Government.

5. Did the Borrower/Executor follow up on critical assumptions and take steps to make necessary adjustments?

No, the leadership – and willingness - necessary to take the needed decisions and to make necessary adjustments were often not found, neither in the MARNDR nor in the ODVA.

D. Project Performance Monitoring by the Borrower/Executor

- 1. Was the way through which project performance would be monitored¹⁴ (and the resource requirements involved) clearly established and agreed upon with the borrower/executing agency? If so, at what stage?**

All of the monitoring procedures were agreed upon with the borrower. When the reformulation took place, some of these procedures were also updated but others were waived (for instance the need to gather baseline and time series data for the ex-post evaluation). The 1995 reformulation removed the need for a retrospective evaluation of progress in the third year of execution. This robbed the project of a mandatory review to ponder whether it still was on track. The Bank's evaluation tools improve steadily over time and it is possible that the devastating disregard for the non-construction project components may have been noted and corrected.

- 2. How was project performance actually monitored in practice? Were any difficulties encountered? If so, explain.**

The Bank used the normal procedures to monitor the project performance. These included periodic visits to the Ministry and to the executing unit in the field; consideration of specific issues presented for non-objection; the analysis of progress reports; and review of financial statements.

In the case of the infrastructure component where a supervising firm was hired, a close relationship with this firm was established.

In the case of force account works, the Loan Contract required that the ODVA hire a specialized consulting firm to monitor their operations prior to the first disbursement. This condition was complied with and the Bank was satisfied with the transparency and efficiency of the works executed directly by the ODVA with its own staff and equipment.

The main difficulty was perhaps the lack of a reliable communication system between the Bank and the executing unit. This was, due to the physical distance (the executing unit was located in Pont Sondé while the Bank's office is in Pétiön Ville), and to the deplorable conditions of public services for telephone, fax or electronic mail that rendered them unreliable.

- 3. Were the indicators and benchmarks selected to measure the achievement of the project's objectives adequate and useful? If not, explain.**

The following indicators were set to measure the achievement of objectives:

- a) The average rice yield achieves 5.0 metric ton per hectare.
- b) 40,000 farmers will benefit from an intact and well-maintained irrigation system.
- c) 20,000 ha will be administered and regularly maintained.
- d) An appropriate management and maintenance strategy for the entire irrigation system is elaborated and adopted.

¹⁴ For example, was there a clear definition of who would be responsible for gathering the information on the indicators and benchmarks; who would be responsible for analyzing this information; whether annual or midterm reviews would be undertaken; who would be responsible for undertaking this review; was a mechanism specified to ensure that the results of the reviews would be used to adjust the project?

As can be seen, even though the indicators were adequate to monitor achievement of the key project objectives of higher productivity and output, since no mechanism for gathering data was established, they were not reported on.

The indicators to measure progress in constructing the infrastructure components were well reported on since most of the information was either generated by the ODVA directly or by the contractor in charge of the civil works and/or by the supervising firm. Examples of those indicators are:

- a) The Canneau dam reconstructed by June 1990
- b) Studies of river bank protection measures downstream of the Canneau dam are completed by 1996
- c) 23,5 km of primary irrigation canals rehabilitated by November 2000.
- d) 63,0 km of secondary irrigation canals rehabilitated by November 2000.
- e) 35,8 km of the primary and secondary drainage system rehabilitated by November 2000.
- f) 166 water regulation elements and 22 small bridges constructed and / or rehabilitated by November 2000.
- g) 75,0 km of access / service roads improved by November 2000.
- h) Global maintenance plan for the entire irrigation system, administered by the ODVA elaborated by September 1998 (see GOPA/SCP/LGL study).
- i) 94,65 km of primary irrigation and drainage canals are mechanically cleaned out from sediments and aquatic vegetation by December 1998.
- h) 21,46 km of secondary irrigation and drainage canals are manually cleaned out from sediments and aquatic vegetation by December 1998.
- i) 25 water regulation structures installed and/or repaired by November 2000.
- j) 5 main access/service roads improved by November 2000.
- k) 162 km of irrigation and drainage canals of the tertiary system are installed and functional by July 2001.
- l) The building for the seed production center is rehabilitated by July 1997.
- m) The administration center of the executing organization ODVA is rehabilitated by December 1997.

The indicators used for the other components were:

- a) Land register of 6,100 ha, undertaken by ONACA, completed by June 1998.
- b) 100% of water users are registered and organized to self-manage the tertiary system by July 2001.
- c) The daily seed production capacity of the center is at least 7 metric tons (during active season) by July 1997.
- d) Awareness program in the entire rehabilitation area implemented by July 2001.
- e) 119 water groups are organized and participate in the maintenance of the rehabilitated irrigation system by July 2001.
- f) 3 water management associations as well as 1 water user federation are established by July 2001.
- g) The professional staff of the executing organization and the project execution unit is completed and trained in accordance with the new mandate (supervision/evaluation) by December 1998.
- h) A consulting mission will be realized in order to define the new management concept of the irrigation system by December 2000.
- i) An adequate water tariff system for the entire irrigation system of the Artibonite Valley is elaborated and progressively adopted by July 2001.

E. Bank Supervision

- 1. How well did the Bank perform throughout the execution phase of the project? (For example, did the Bank correctly anticipate potential problems at the objective, component, and assumption levels? Did it take corrective action to solve problems in a timely manner? Was the Bank an able and efficient supervisor/advisor?)**

The Bank did anticipate some of the potential problems and analyzed and discussed them at the appropriate levels (ministry, ODVA, executing unit). However the primary focus was on the infrastructure components more than on those related to the institutional and governance aspects of the project.

The decision to transfer all the loan resources from construction of the tertiary canals and the farm connections to repair the damage from Hurricane Georges was effective in repairing the damage, but resulted in the farms not being connected to the system. The responsibility for financing of the tertiary canals and the farm connections was passed to the Government through an increase in the local counterpart contribution. These works were removed from the construction contract and replaced by repair activities.

The removal of the retrospective mid term evaluation did nothing to expedite the launch of the project and removed a valuable opportunity to reassess progress in achieving development objectives.

The decision to remove the credit component did little to expedite the launch of the project in 1995, but it impacted on the goal of the project to increase productivity and output.

The Bank took the lead in designing the project and conceptualizing reformulations, however, changes were wrought in the project that caused the development objectives not to be achieved. The canals never reached the farms, no credit was provided, no tariffs were collected, and no rural organization took place as planned.

- 2. Did the Bank/Executor relationship, and the Bank's relationship with other institutions and agencies that were involved in the project, have any significant impact (positive or negative) on the outcome of the project. If so, what was the impact?**

Throughout project execution, there was constant friction with the executing unit due to the attitude of its director, who was often reluctant to follow the Bank's guidance. This situation was overcome with the introduction of the supervising firm, which had the responsibility for the follow-up of the infrastructure component.

However, the Bank was able to create very good relationships with other donors and agencies that were working in the sector and particularly in the Artibonite Valley (the Taiwanese and Cuban missions, the United States Agency for International Development –USAID, the Food and Agriculture Organization –FAO, and the Inter American Institute of Agricultural Cooperation –IICA, among others).

MAIN LESSONS AND RECOMMENDATIONS FOR FUTURE PROJECTS¹⁵.

- A. What are the main lessons that have been learned from this project and that could be relevant to other projects? (For example, design flaws that should be avoided in similar operations, institutional issues that were overlooked or inadequately addressed, innovative solutions that resolved problems during execution, successful or unsuccessful attempts to make the project financially sustainable, suggestions regarding better project performance indicators, etc.)

¹⁵ This section, in conjunction with the project identification information contained in the box on the first page of this form, will be utilized as a summary report for dissemination purposes.

1. PROJECT DESIGN

The analysis of the project in 1990 noted that even total success would have still left the target population below the poverty line. .

The decision to have the feasibility of this project rely on the resources of a separate project (838/SF-HA) misleads the Bank in its analysis of the economic feasibility. There was no mention of this supplementary financing in the Loan Proposal for 845/SF-HA. There was no mention of this arrangement in the progress reports so that no one noticed when it never materialized. Subsequent decisions to shift the road works to 945/SF-HA and then to 991/SF-HA further muddled the situation. The use of multiple, unrelated loans to finance the same objectives is inefficient and should be avoided. It would be simpler and more effective to approve supplementary financing for the project.

The economic analysis may have erroneously considered all Bank financing for 690/SF-HA, the expanded technical cooperation, the OPEC co-financing and all local counterpart for 690/SF-HA as sunk costs in analyzing the economic viability of 845/SF-HA. Since a significant amount of these funds had not yet been disbursed this approach overestimated the economic viability of 845/SF-HA. The economic analysis also underestimated investment costs by not taking into account the supplementary financing for secondary roads via 838/SF-HA. It would have been more accurate to provide the Board with the economic feasibility of 845/SF-HA plus all other planned investments. Since this many not have been done it is probable that the IRR was below the Bank threshold at the time. The Bank should ensure that the economic viability of supplemental financing operations be based on accurate estimation of sunk costs.

Another aspect of project design was having three executing agencies all of which were to manage project resources. ONACA was to handle the cadastral survey, the Central Bank was to manage the credit component and the ODVA was to handle the rest. This was corrected when the project was reformulated in 1995. The ODVA assumed responsibility for managing all project funds. However, instead of improving the institutional arrangement for the credit component the whole activity was summarily eliminated. Multiple executing agencies should be avoided in project design.

The decision to deal with the problem of small plot sizes by increasing the technological level of farmers was laudable. However, the decision to not consider any other options such as consolidation of plots seems overly facile. The Bank should require the presentation of the analysis of alternate designs to show that the one chosen is the optimum one.

2. PROJECT EXECUTION

Project promotion should be completed before -or at least at the same time- the conclusion of the civil works. However, in this particular situation the promotion activities were never completed. Given that the civil works component was never completed (tertiary canals and farm connections) the organization of people living and working in the project area is still of great significance since, on the one hand, they are currently damaging the infrastructure to get water and, on the other, they are also starting to squat on the access roads and along the canals.

The promotion activities seem to have been relegated to secondary importance in project execution. It is important to emphasize activities of building public awareness, training and organization of beneficiary populations. The deficiency of these activities is in part to blame for the fact that no tariffs have ever been paid, no maintenance is done, squatting is advancing and farmers are breaking into the main canals to get water.

In order to manage the irrigation system the ODVA needed to have access to up to date cadastral information. Not only was there a specific component to produce a new cadastral survey, but, Clause 6.06 of the Loan Contract specifically required it. The 1995 reformulation confirmed this commitment. The decision to make a project goal also a contractual condition reflects the importance given to this activity. Nevertheless, it was not complied with and there is no documentary evidence of any effort by the Executing Agency to comply. The project team should remain more in touch with the project during execution to serve as a line of defense against changes in the project that could jeopardize its viability.

The financing from OPEC was notoriously slow in being disbursed by that agency. The Bank accepted to manage the funds, however, it did not have the real authority to disburse. This created significant delays between the instruction to pay (given by the Bank) and actual payment (performed by OPEC). The delays were so that execution was affected. Therefore, future administration contracts with OPEC should include a specific mechanism to ensure that payments are made before a pre-established reasonable number of days (to be counted from the date of the Bank's instruction to pay).

The Bank should also avoid an internal culture of doing all that is possible to complete the execution of a project once it has been launched regardless of whether development objectives are being met. There were clear indications during execution that the project's viability was on the line or maybe had been irrevocably lost. Nevertheless, the Bank doggedly forged ahead to complete as much of the physical infrastructure as possible.

3. SUSTAINABILITY

The original project design placed significant emphasis on collection of tariffs in order to prevent the project infrastructure falling into decay due to lack of maintenance. Nevertheless, in the 1995 reformulation the tariff agreement was scrapped in exchange for a contractual commitment to strike a new agreement within 12 months of entry into force. This condition was never complied with. No progress reports ever mentioned it. The financial statements were supposed to monitor compliance with the tariff clause but they never mentioned it. The negative implications for the sustainability of the project are clear. The Bank should have been more vigilant in requiring the compliance with these type of clauses, since they are of extreme importance to ensure the project's sustainability.

The Loan Contract also required the presentation of a maintenance report each year showing the plan for maintaining the project infrastructure and assets and the status of these assets. The Executing Unit never complied with this condition. The negative implications for the sustainability of the project investments are clear. The Bank should have been more vigilant in requiring compliance with this type of clause.

4. REFORMULATIONS

Continuing to disburse and extend periods of a project that was not achieving its objectives is not a sound practice. When the project was reformulated in 1995 the Bank already began to notice that little or no maintenance was ever done during the first phase, plot sizes were still too small, support activities like credit would not occur, no tariffs had been collected, the Executing Agency was weak and cost escalation made the budget for civil works insufficient. At that time, none of the Bank financing had been disbursed and this could have been an ideal opportunity to reassess the decision to stick with the project's original design. Even though these factors placed in jeopardy the central goals of higher output and productivity the reformulation failed to confront these shortcomings. This led the Bank to launch the project with little basis for expecting the development goals to be met. This seems to be linked to the overwhelming desire at the time to launch the project quickly so it would coincide with a general effort to inject massive amounts of aid into Haiti to shore up the fragile democratic process¹⁶. In the end, however, the political crisis got worse and the project did not meet its development objectives. The Bank should resist the pressure to use ongoing specific investment projects as tools to shore up political processes. If it is deemed to be a priority to pump money into a country to cover a particularly fragile and pivotal moment in its political development, then separate operations should be designed for this purpose.

The decision to use the money earmarked for credit to finance civil works had a negative impact on the achievement of the basic objective of higher output and productivity. Since the project still had not been ratified, it would have been better to increase the loan amount to cover all the civil works and retain the credit component.

The main purpose of the 1995 reformulation was to launch the project as quickly as possible. For this reason it is unclear why the mid term retrospective review was eliminated. This deprived the Borrower and the Bank of a mandatory moment of reflection. It is hard to find any benefit deriving from this decision. The Bank should never eliminate a mid term review without a solid justification for doing so.

In addition, the decision to eliminate the ex-post evaluation could have been taken without eliminating the requirement that base line data be collected. The decision to not collect data on living standards, output levels, productivity, levels of organization and land tenancy left project managers without a tool to gauge progress in achieving development objectives. The Bank should include the collection of base line data in the preparation of a project. If this is not possible, then it should not be allowed to be launched without it. This is the only way to ensure we have a solid basis for measuring development impact.

The decision to switch the Bank financing away from the tertiary canals and farm connections to the repair of hurricane damage resulted in the farmers never being hooked up to the irrigation system. The consequences of these type of changes should have been carefully analyzed.

- B. Based on the lessons learned from this project, indicate possible improvements in Bank policies, strategies, practices and procedures. (For example, recommendations for streamlining procurement, improving dialog**

¹⁶ Reformulation document 1995.

with borrowers, facilitating timely reformulations, suggested changes in Bank operating policies and strategies, etc.)

BANK MANAGEMENT OF CO-FINANCING RESOURCES

When establishing the overall conditions for disbursement of funds managed by the Bank, it is advisable to assure that the Bank will have all the authority to disburse those funds in a timely fashion. This implies including in the management contracts specific deadlines for the funding source to honor the IDB instruction to pay.

MID TERM EVALUATION

Despite the prerogative that the country offices have to request an administrative mission, complex projects like this one should require mid term evaluations. This would provide for a valuable moment of reflection on the attainment of development objectives.

TRIGGERS FOR REFORMULATION OR CANCELATION

One of the aspects that should be analyzed and perhaps incorporated into the Bank's procedures¹⁷ is a trigger mechanism to realize when to reformulate a project or to cancel it, depending on its performance. This mechanism will avoid pumping good money into a project where the achievement of its development objectives is doubtful. This means that rigorous indicators need to be developed that provide objective measures of progress in attainment of development objectives. Repeated and significant failure as measured by the indicators would automatically require the Bank to justify reformulating the project or canceling it.

VIABILITY ANALYSIS

Any project analysis that concludes that the target population will remain considerably below the poverty line even if the project is totally successful raises the issue of how the government set its investment priorities, and how the Bank's programming exercise has contributed to Haiti's economic development. A project that is feasible only as long as it can efficiently substitute for imports should be monitored very carefully throughout execution to ensure that the minimum level of efficiency is retained. There is a tendency to make the point at the time of approval but not to continue to ensure this remains true during execution.

COMPLIANCE WITH CONTRACTUAL CONDITIONS

The Bank should institute a system whereby an early warning system prevents approval of disbursements if there is a contractual condition that has not been complied with. The Representative could override the block, but would be required to enter into the LMS system the justification for doing so. This would force any such decision to be totally conscious.

COMMUNICATION

For projects whose executing units are not located in the capital city or some other major metropolitan area, a reliable communication channel between the Bank and the executing unit has to be established prior to the project's start. This may

¹⁷ The Bank has already adopted some alert systems for the project monitoring.

include internet and radios (private systems) as well as other means provided through public enterprises.

ADDITIONAL COMMENTS

If there are any additional aspects concerning this operation that have not been covered thus far, present them in this section.

As can be noted in the next section of this document, the perception that the executor has with regard to the project as a whole and to the project's execution differs drastically with the Bank's position. This situation can be explained since the executor always looked at the project as an infrastructure project. The Bank has considered it a development project.

Notwithstanding this divergence, the executor does coincide with the Bank in the following aspects:

- a) The need of the tertiary canals and parcel connections
- b) The difficulties in the communication with the Bank due to the distance and the lack of appropriate means.
- c) The exogenous factors that affected the project's normal execution (the hurricane, political instability)
- d) The difficulties in accessing the OPEC funds.

PART TWO

(TO BE PREPARED BY THE BORROWER)

| | |
|--|--|
| PROJECT NAME | Artibonite Valley Agricultural Development Project |
| IDB PROJECT NUMBER | First Stage: HA0018, Second Stage: HA0029 and HA0078 |
| IDB LOAN AND TC NUMBER(S): | First Stage: 473/SF-HA Second Stage: 690/SF-HA, 845/SF-HA and 526/OP-HA (OPEC Co-financing) |
| BORROWER AGENCY(IES) RESPONSIBLE FOR THIS REPORT: | Organism for the Development of the Artibonite Valley -ODVA |

1. PROJECT OBJECTIVES

- A. Although it may be difficult to fully assess all of the results of the project at this stage, please indicate which objectives (physicals and none-physicals) you feel have been achieved under the project, and to what extent.**

The project was successful in achieving all its goals. The infrastructure built with the project's resources has been provided and is working. The final beneficiaries are happy with it but are also waiting for the government to begin the construction of the tertiary canals and the parcel connections.

The ODVA has been strengthened and is now more prepared to manage projects similar to this one.

- B. In your judgment, are there any project objectives (physicals and none-physicals) that are unlikely ever to be achieved? If so, why?**

No.

PROJECT DESIGN AND EXECUTION

- A. What aspects of the project's overall design most contributed to the project's successes and/or failures?**

In general terms, the project was well designed even though it overestimated the local technical and physical capacities in the zone. This generated delays in the procurement processes.

Another aspect was the availability of some materials that were needed for the construction and that could not be guaranteed in a country like Haiti. The project area is physically located in a zone that can only be accessed by one road. When the block was closed for any reason, some delays were produced in project execution. Therefore the project design should have considered this situation.

Another aspect that was certainly overlooked are the climatic conditions in the Artibonite Valley that allow work to be carried out in the zone for a period no longer than six to eight months per year, and not continuously as the project design supposed.

B. What aspects of project execution most contributed to the project's successes and/or failures? Why?

Communication was difficult with the Bank and with the other parties involved in project execution (constructing and supervising firms) because of the following reasons: i) The physical distance from the Bank's office and the lack of a good communication system (telephones, fax and internet services in Pont Sonde were intermittent and often did not work for a long time); and ii) Some of the technical decisions were not taken immediately by the constructing or supervising firms as many times they had to discuss them with their central offices located either in Port-au-Prince or in the USA.

C. Did significant problems arise during project execution? If so, what were these problems and what measures were taken in an attempt to solve them? Were these measures successful?

Yes. They were linked to the political situation of the country (coup d'etat, invasion, blockade, turmoil, etc.) and to the climatic conditions (hurricane George in 1998).

On the first case, the project could do nothing and had to practically paralyze its activities during periods of instability. On the second case, the project was prompt to react with a reformulation that could help to repair the major hydraulic infrastructure that was damaged by the hurricane.

Beside these two cases, the problems presented were the usual ones linked to any project of similar characteristics.

D. Has the institutional capacity of the institutions and agencies involved in the project been strengthened as a result of the project? If so, how?

Yes. The ODVA is now more prepared to manage projects similar to this one.

E. Did any unforeseen events, beyond the control of those directly involved in project execution, adversely affect the project and the likelihood that it will achieve its development objectives? If so, please explain.

Yes. The political situation of the country has not settled despite the efforts of both Haitians and the international community.

BANK PERFORMANCE

- A. How well did the Bank perform during the preparation and execution phase of the project? (Was the Bank an able and efficient administrator? Did the Bank provide good and timely advice? Did the Bank maintain an effective dialog with the executing agency and between the institutions or agencies that were involved with the project?)**

It was very difficult to deal with the Bank and to make it understand and accept, for example, the delays in the execution that were not under the control of the executing unit. Sometimes the Bank adopted inflexible positions that often generated tense situations with the executing unit, the construction firm and the supervision firm.

The disbursement requests were often rejected and took a long time to prepare all the documentation demanded by the Bank.

Dealing with the OPEC was also a problem because the Bank's role in managing the OPEC's funds was never clear: When the executing unit addressed the OPEC directly, the Bank told the unit not to do so, and when it addressed the Bank, the latter instructed it to do so directly with the OPEC. In most of the cases any decision concerning the OPEC loan took a very long time. The disbursement of the OPEC loan was also very slow and often reached a dead point in which the Bank had already revised and authorized the disbursement, but the OPEC did not process it, so nobody knew exactly what the problem was.

- B. What significant impact, if any, did the Bank's performance have on the outcome of this project?**

Even though stubborn and inflexible in some cases, the Bank's overall performance in the project was acceptable.

LESSONS LEARNED

- A. Are there any lessons from the Bank's performance in this project that could be used to improve future projects? If so, what are they?**

Communication. The Bank has to be more in touch with the executing unit and more "in the field". Sporadic inspection visits are not enough to control a project of this magnitude.

- B. Are there any additional comments or recommendations regarding the project and/or the Bank that need to be mentioned and/or that should be taken into account in future projects?**

No.

PART THREE— BASIC DATA

(To be completed by the Bank)

LOAN 473/SF-HA

Basic Project Data

| PROJECT DATES (MONTH/YEAR) | ORIGINAL | ACTUAL |
|--|-----------|-----------|
| Date of inclusion in pipeline I | | |
| Date of Profile II or Loan Request | 12-NOV-75 | |
| Date of Analysis Mission | 17-MAY-75 | |
| Date of Loan Committee Approval | 17-DEC-76 | |
| Date of Board Approval | 05-AUG-76 | |
| Date of Contract Effectiveness | 09-MAR-77 | |
| Date of Compliance with Prior Conditions | | |
| Calendar of Investments | | |
| - Starting date | | |
| - End date | | |
| Disbursement calendar | | |
| - First disbursement | 09-JUN-77 | 09-DEC-77 |
| - Last disbursement | 09-MAR-81 | 09-DEC-83 |
| For Sector Loans | | |
| - First tranche | N/A | N/A |
| - Second tranche | N/A | N/A |
| - Third tranche | N/A | N/A |
| Date of Physical Initiation of Works | MAR-78 | |
| Date of Loan Commitment | | |
| Date(s) of Cancellation(s) | | |

| MID-TERM REVIEW AND EVALUATION: | ORIGINAL | ACTUAL |
|---|----------|--------|
| Date of mid-term review (if required) | N/A | |
| Due date of borrower ex-post evaluation (if required) | N/A | |
| Due date of Bank ex-post evaluation (if required) | N/A | |

| SUMMARY: COST DATA (THOUSANDS OF US \$) | ORIGINAL | ACTUAL |
|---|----------|--------|
| Total Amount of IDB Financing | 5,000 | 5,000 |
| IDB Financing as % of Total Cost | 84.7 | 80.0 |
| Total Cost of Project | 5,900 | N/A |
| Cumulative Investment as of / month/year) | | |
| Remainder Required for Completion | | |

Project Cost And Financing (all amounts in millions of US\$)

1. Project cost and source of financing

| Cat. Inves. | ORIGINAL | | | | ACTUAL | | | |
|----------------|----------|----------|-------|-------|--------|----------|-------|-------|
| | IDB | Borrower | Other | Total | IDB | Borrower | Other | Total |
| 1 | 0.82 | 0.48 | | 1.30 | 0.93 | 0.80 | | 1.73 |
| 2 | 3.49 | 0.25 | | 3.74 | 3.88 | - | | 3.88 |
| 3 | 0.55 | 0.05 | | 0.60 | 0.05 | 0.05 | | 0.10 |
| 4 | - | 0.10 | | 0.10 | - | 0.03 | | 0.30 |
| 5 | 0.14 | 0.02 | | 0.16 | 0.14 | 0.02 | | 0.16 |
| 6 | | | | | | | | |
| Total | 5.00 | 0.90 | | 5.90 | 5.00 | 0.90 | | 5.90 |

2. Schedule of Investments

| Years | ORIGINAL | | | | ACTUAL | | | |
|-----------------|----------|----------|--------|-------|--------|----------|--------|-------|
| | IDB | Borrower | Others | Total | IDB | Borrower | Others | Total |
| 1 | 2.10 | 0.28 | | 2.38 | | | | |
| 2 | 1.20 | 0.22 | | 1.42 | | | | |
| 3 | 0.80 | 0.20 | | 1.00 | | | | |
| 4 | 0.90 | 0.20 | | 1.10 | | | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
| 7 ¹⁸ | | | | | | | | |
| Total | 5.00 | 0.90 | | 5.90 | | | | |

Loan Data

| LOAN DATA | VALUES/DATES |
|-------------------------|--------------|
| Original Loan/TC amount | 5.00 |
| Amount disbursed | 5.00 |
| Amount canceled | N/A |
| First disbursement: | |
| - Original date (m/y) | JUN-77 |
| - Actual date (m/y) | DEC-77 |
| Last disbursement: | |
| - Original date (m/y) | MAR-81 |
| - Actual date (m/y) | DEC-83 |

¹⁸ If execution took more than 7 years, submit supplementary data for additional years as required.

LOAN: 690/SF-HA**Basic Project Data**

| PROJECT DATES (MONTH/YEAR) | ORIGINAL | ACTUAL |
|--|-----------|-----------|
| Date of inclusion in pipeline I | | |
| Date of Profile II or Loan Request | 29-MAR-82 | |
| Date of Analysis Mission | 24-MAY-82 | |
| Date of Loan Committee Approval | | |
| Date of Board Approval | 30-SEP-82 | |
| Date of Contract Effectiveness | 28-JUN-83 | 12-JAN-84 |
| Date of Compliance with Prior Conditions | | |
| Calendar of Investments | | |
| - Starting date | | |
| - End date | | |
| Disbursement calendar | | |
| - First disbursement | 12-JAN-86 | 12-JUL-89 |
| - Last disbursement | 12-JAN-91 | 12-JUL-97 |
| For Sector Loans | | |
| - First tranche | N/A | N/A |
| - Second tranche | N/A | N/A |
| - Third tranche | N/A | N/A |
| Date of Physical Initiation of Works | | |
| Date of Loan Commitment | | |
| Date(s) of Cancellation(s) | 12-JUL-97 | |

| MID-TERM REVIEW AND EVALUATION: | ORIGINAL | ACTUAL |
|---|----------|--------|
| Date of mid-term review (if required) | N/A | |
| Due date of borrower ex-post evaluation (if required) | N/A | |
| Due date of Bank ex-post evaluation (if required) | N/A | |

| SUMMARY: COST DATA (THOUSANDS OF US \$) | ORIGINAL | ACTUAL |
|---|----------|--------|
| Total Amount of IDB Financing | 17,600 | 17,597 |
| IDB Financing as % of Total Cost | 79.6 | 80.0 |
| Total Cost of Project | 22,120 | 22,119 |
| Cumulative Investment as of ___ / ___ month/year) | | |
| Remainder Required for Completion | | |

Project Cost And Financing (all amounts in millions of US\$)

1. Project cost and source of financing

| Cat. Inves. | ORIGINAL | | | | ACTUAL | | | |
|----------------|----------|----------|-------|--------|--------|----------|-------|-------|
| | IDB | Borrower | Other | Total | IDB | Borrower | Other | Total |
| 1 | 1.945 | 0.200 | | 2.145 | | | | |
| 2 | 9.425 | 1.846 | | 11.271 | | | | |
| 3 | 2.127 | 0.016 | | 2.143 | | | | |
| 4 | - | 1.391 | | 1.391 | | | | |
| 5 | 3.531 | 0.992 | | 4.523 | | | | |
| 6 | 0.572 | 0.075 | | 0.647 | | | | |
| Total | 17.600 | 4.520 | | 22.120 | | | | |

2. Schedule of Investments

| Cat. Inves. | ORIGINAL | | | | ACTUAL | | | |
|----------------|----------|----------|-------|--------|--------|----------|-------|-------|
| | IDB | Borrower | Other | Total | IDB | Borrower | Other | Total |
| 1982 | 4.327 | 0.687 | | 5.014 | | | | |
| 1983 | 7.250 | 1.636 | | 8.886 | | | | |
| 1984 | 3.817 | 1.004 | | 4.821 | 0.349 | | | |
| 1985 | 2.206 | 1.193 | | 3.399 | 1.039 | | | |
| 1986 | | | | | 0.395 | | | |
| 1987 | | | | | 0.826 | | | |
| 1988 | | | | | 3.139 | | | |
| 1989 | | | | | 4.038 | | | |
| 1990 | | | | | 1.773 | | | |
| 1991 | | | | | 1.079 | | | |
| 1992 | | | | | 0.122 | | | |
| 1993 | | | | | - | | | |
| 1994 | | | | | - | | | |
| 1995 | | | | | 1.055 | | | |
| 1996 | | | | | 0.947 | | | |
| 1997 | | | | | 2.832 | | | |
| Total | 17.600 | 4.520 | | 22.120 | 17.597 | | | |

Loan Data¹⁹

| LOAN DATA | VALUES/DATES |
|-------------------------|--------------|
| Original Loan/TC amount | 17,600,000 |
| Amount disbursed | |
| Amount canceled | 2,957 |
| First disbursement: | |
| - Original date (m/y) | 12-JAN-86 |
| - Actual date (m/y) | 12-JUL-89 |
| Last disbursement: | |
| - Original date (m/y) | 12-JAN-91 |
| - Actual date (m/y) | 12-JUL-97 |

LOAN 845/SF-HA

Basic Project Data

| PROJECT DATES (MONTH/YEAR) | ORIGINAL | ACTUAL |
|--|-----------|-----------|
| Date of inclusion in pipeline I | | |
| Date of Profile II or Loan Request | | |
| Date of Analysis Mission | | |
| Date of Loan Committee Approval | | |
| Date of Board Approval | 07-NOV-90 | |
| Date of Contract Effectiveness | 09-APR-91 | 03-AUG-95 |
| Date of Compliance with Prior Conditions | 19-SEP-95 | 25-SEP-95 |
| Calendar of Investments | | |
| - Starting date | | |
| - End date | | |
| Disbursement calendar | | |
| - First disbursement | | |
| - Last disbursement | 20-MAR-00 | 02-AUG-02 |
| For Sector Loans | | |
| - First tranche | N/A | N/A |
| - Second tranche | N/A | N/A |
| - Third tranche | N/A | N/A |
| Date of Physical Initiation of Works | | AUG-95 |
| Date of Loan Commitment | | |
| Date(s) of Cancellation(s) | | 02-AUG-02 |

| MID-TERM REVIEW AND EVALUATION: | ORIGINAL | ACTUAL |
|---|-----------|--------|
| Date of mid-term review (if required) | N/A | |
| Due date of borrower ex-post evaluation (if required) | AUG-2005* | |
| Due date of Bank ex-post evaluation (if required) | N/A | |

* This requirement was eliminated with the first loan modification

| SUMMARY: COST DATA (THOUSANDS OF US \$) | ORIGINAL | ACTUAL |
|---|----------|--------|
| Total Amount of IDB Financing | 11,550 | 11,441 |
| IDB Financing as % of Total Cost | 83.0 | |
| Total Cost of Project | 14,146 | |
| Cumulative Investment as of ___ / ___ month/year) | | |
| Remainder Required for Completion | | |

¹⁹ If more than one IDB Loan/TC operation was used to finance the project, submit this data for each operation.

Project Cost and Financing (all amounts in millions of US\$)

1. Project cost and source of financing

| Cat. Inves. | ORIGINAL | | | | ACTUAL | | | |
|----------------|----------|----------|-------|--------|--------|----------|-------|--------|
| | IDB | Borrower | Other | Total | IDB | Borrower | Other | Total |
| 1991 | 0.385 | 0.480 | | 0.865 | 2.084 | 0.480 | 1.426 | 3.558 |
| 1992 | 6.576 | - | | 6.576 | 8.362 | - | 0.050 | 8.412 |
| 1993 | 0.348 | 0.897 | | 1.245 | 0.555 | 0.897 | 0.325 | 1.777 |
| 1994 | 1.520 | 0.665 | | 2.185 | - | 0.665 | | 0.665 |
| 1995 | 2.282 | 0.475 | | 2.757 | - | 0.475 | | 0.475 |
| 1996 | 0.439 | 0.079 | | 0.518 | 0.439 | 0.079 | | 0.518 |
| Total | 11.550 | 2.596 | | 14.146 | 11.441 | 2.596 | 1.800 | 15.837 |

2. Schedule of Investments

| Years | ORIGINAL | | | | ACTUAL | | | |
|-------|----------|----------|--------|--------|--------|----------|--------|-------|
| | IDB | Borrower | Others | Total | IDB | Borrower | Others | Total |
| 1991 | 2.302 | 0.914 | | 3.216 | | | | - |
| 1992 | 3.450 | 0.830 | | 4.280 | | | | - |
| 1993 | 2.034 | 0.355 | | 2.389 | | | | - |
| 1994 | 2.201 | 0.371 | | 2.572 | | | | - |
| 1995 | 1.562 | 0.127 | | 1.689 | 0.106 | | | |
| 1996 | | | | | 0.581 | | | |
| 1997 | | | | | 1.197 | | | |
| 1998 | | | | | 2.826 | | | |
| 1999 | | | | | 2.374 | | | |
| 2000 | | | | | 3.354 | | | |
| 2010 | | | | | 0.821 | | | |
| 2002 | | | | | 0.144 | | | |
| Total | 11.549 | 2.597 | | 14.146 | 11.441 | | | |

Loan Data

| LOAN DATA | VALUES/DATES |
|-------------------------|--------------|
| Original Loan/TC amount | 11,550,000 |
| Amount disbursed | 11,441,115 |
| Amount canceled | 108,884 |
| First disbursement: | |
| - Original date (m/y) | OCT-1990 |
| - Actual date (m/y) | OCT-1995 |
| Last disbursement: | |
| - Original date (m/y) | MAR-2000 |
| - Actual date (m/y) | AUG-2002 |

ATN/SF-2152-HA

| TC DATA | VALUES/DATES |
|-----------------------|--------------|
| Original TC amount | 1.100.000 |
| Actual TC amount | 1.593.630 |
| Amount disbursed | 1.250.088 |
| Amount canceled | 342.748 |
| First disbursement: | |
| - Original date (m/y) | 28-JUN-83 |
| - Actual date (m/y) | 28-JUN-83 |
| Last disbursement: | |
| - Original date (m/y) | 28-JUN-87 |
| - Actual date (m/y) | 30-APR-02 |

PART FOUR
HAITI
ARTIBONITE VALLEY AGRICULTURAL DEVELOPMENT PROJECT
First Stage: HA-0018 (473/SF-HA & ATN /SF-1467-HA)
Second Stage: HA-0029 & HA-0078 (690/SF-HA, 845/SF-HA & ATN/SF-2152-HA)

PROJECT COMPLETION REPORT (PCR)
Management Review Committee
August 25, 2003

1. INVITEES TO CRG

Robert Kaplan, Renato Puch, Manuel Rodolfo Agosin, Sandra Bartels, Alberto Gómez-Gaviria, Marcia Bonilla-Roth, María Eugenia Nepote-Cit, Gerard Johnson, Camille Gaskin-Reyes, Laura Ramirez-Ramos, Christian Gomez Fabling, Lionel Nicol, Jorge Sapoznikow, Ma. Asunción Aguila, Alvaro Llosa, José Rente Nascimento, Nadine Schiavi, Carlos Pineda Manheim, Barbara Szaszkiewicz, Michèle Lemay, Emilio Cueto, John J. Hastings, Paul Trapido, Astrid Wynter, Juan Carlos Paez Zamora, Diego Arias, Javier Jimenez Mosquera, Javier Cayo, Maristella Aldana

PARTICIPANTS

Robert Kaplan (RE2/EN2), Gerard Johnson (COF/CGU), Emilio Cueto (COF/CHA), John J. Hastings (RE2/RE2), Juan Carlos Paez Zamora (COF/CHA), George Alexandrou (RE2/EN2), Paul Trapido (RE2/EN2), Nadine Schiavi (RE2/EN2), Silvia Echeverría (RE2/EN2), Javier Jimenez Mosquera, (LEG/OPR), Maristella Aldana (LEG/OPR), Sandra Bartels (RE2/RE2), Ronan Le Berre (RE2/OD3), and Jacques Roumani (ROS/PMP). Written comments were received from John J. Hastings (RE2/RE2), Adriana Delgado (RE1/EN1), and Nicolas Uuay (RE3/EN3).

ISSUES RAISED

The Management Review Committee reviewed the above-referenced Project Completion Report. The principle themes treated in the CRG were:

1. **Style and general content of the document.** The Management Review Committee observed that the Project Completion Report was well prepared, thorough and well written, with much information on execution offering a lot of lessons.
2. **Results of the project.** Discussion in the Management Review Committee focused on several issues, including: the degree to which the Project could be said to have achieved its objectives, the institutional framework, including the technical capacity of the executing agency and the level of community organization; the complexity and scale of the Project; the degree to which independent baseline indicators exist to assess Project success; the impact of exogenous factors such as political instability and Hurricane Georges on the Project, plot size and land dynamics and their impact on incomes in the Artibonite Valley, and the experience of other donors working in the area.

CONCLUSIONS AND RECOMMENDATIONS

The Committee reviewed the above-referenced **Project Completion Report**, and recommended that the following comments and observations should be analyzed and incorporated in the Project Completion Report.

1. It was agreed that certain objectives and outcomes were achieved while others were not. Thus, much of the irrigation works component was delivered, allowing the targeted beneficiary population to attain benefits through the Project, while complementary components (for example for credit or product diversification) were not. There were also important gaps in the works component in terms of connections not made to all the farms targeted in the Project, and lack of a tariff scheme and works maintenance. As a result it could be inferred that the Project's targets for productivity increases were not reached, while baseline indicators are lacking to verify this independently.

2. The PCR will be reviewed with a view to including more detail and analysis on the institutional framework in terms of the executing organization's technical capacity and level of community participation in the Project, as well as on the nature and impact of land dynamics and land size parcels on agricultural development in the Artibonite Valley.

3. The text of the PCR will also be reviewed to avoid exaggerated language and unsubstantiated assertions.

4. Lessons learned in the execution of this Project to take into account in preparation of HA-0016, for Agricultural Intensification, include: the importance of finishing the necessary irrigation works in the Artibonite Valley and incorporating the necessary mechanisms for their operation; the importance of identifying baseline indicators to measure project success; the need to incorporate farmer and water user association; the need to account for continuous, frequent project team involvement in project administration; and the value of considering possible alternative mechanisms to support execution, such as multi-stage project design and/or a Ministry of Finance role in overseeing project financial control.

[ORIGINAL SIGNED]

Robert N. Kaplan, President CRG

[ORIGINAL SIGNED]

Nadine Schiavi, Secretary