



INTER-AMERICAN DEVELOPMENT BANK
COUNTRY OFFICE OF HAITI

PROJECT COMPLETION REPORT (PCR)¹
PART ONE

PROJECT NAME:	National Program of Hog Restocking, Health Surveillance, and Development of the Hog Industry
SUB-PROJECT:	
PROJECT NUMBER:	HA-0061
LOAN NUMBER:	738/SF-HA ATN/SF-2357-HA
COUNTRY:	Haiti
EXECUTING AGENCY(IES):	Ministry of Agriculture, Natural Resources, and Rural Development (MARNDR)
SECTOR:	Agriculture
MODALITY²:	Investment ³
DATES APPROVED:	December 15, 1983
DATES COMPLETED:	August 2, 2002
LOANS AMOUNTS:	738/SF-HA: \$17,400,000 original \$11,312,780 final ATN/SF-2357-HA: \$910,000 \$542,146 final
FINAL PROJECT IMPLEMENTATION CLASSIFICATION (HS, S, U, VU):	U
FINAL PROJECT ASSUMPTIONS CLASSIFICATION (H, L):	L
FINAL DEVELOPMENT OBJECTIVES CLASSIFICATION (HP, P, LP, I):	P

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.

³ This modality has been used throughout all the documents related to the project. However, when analyzing the project itself, it can clearly be noted that the project was global, since more than one of its components was not completely designed prior to its approval.

I PROJECT OBJECTIVES AND COMPONENTS⁴

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):

Executive Summary

Historical Context: When this project was approved in 1983 it had immense importance for the poor rural population of Haiti. It was triggered by a historical decision to eradicate all the pigs in the country in order to protect the herds in the Dominican Republic and the United States from infection with the devastating African Swine Fever virus. All the pigs in the Dominican Republic were being killed and it was thought that the only way to protect from re-infection was to eliminate all the pigs in Haiti, the other side of the island of Hispaniola.

The threat of infection was successfully eliminated, however, it came at huge cost to millions of Haitian peasants. Since pigs were the main way they accumulated savings and often their only insurance against hunger, their sudden removal was devastating. The eradication program traumatized peasants throughout Haiti and plunged them deeper into poverty. Subsequent compensation programs were mostly ineffective since funds generally did not reach those who had suffered losses and imported pigs quickly succumbed to the harsh environment.

In this dramatic context the Bank stepped forward with a project to restore the living conditions of the affected peasants to at least the levels obtaining prior to the eradication program. In addition to this ambitious goal, the project was also to have left in place an institutional capacity on the part of the Government as well as private farmers to improve the genetic pool, manage new infections and maximize benefits from meat production.

The execution of the project also spanned one of the most dramatic periods in the recent history of Haiti. It was executed in a fast changing context of social upheaval, political crisis and economic decline. These exogenous factors had an unavoidable negative impact on project execution. Launched under the Duvalier dictatorship, the project was deeply affected by the rebellion that removed him from power in 1986. This was followed by five years of crisis until a democratic government was finally elected in 1990. The project was reformulated to adjust to the new context; however, the government was ousted by a military coup in late 1991. The project lay dormant for three years during the ensuing international embargo until a military intervention in 1994 returned the democratic government to power. A second reformulation was then needed to adjust the project to the prevailing conditions. Most execution took place after that point, however, the political crisis continued, as did the economic decline.

Original Goals: At first the idea was to produce over 1.5 million pigs and get them to the target population: the millions of poor peasants devastated by the eradication program. There was also an overall intention to increase the quality and quantity of animal protein consumed by the poor. The project was to have started as soon as the eradication program

⁴ 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.

was officially completed. However, it fell victim to the social and political upheavals of the time and did not really get underway until 1995 when it was clearly too late to help the original target population. Even the credit program set up in a parallel loan to help poor farmers acquire new pigs never made a single loan to this end. In fact, there never was a system for identifying the original beneficiaries or any defined mechanism for getting the pigs to them. Even if these beneficiaries had been identified and a delivery mechanism established, the project components could never have produced the intended goal of 1.5 million pigs.

Two Reformulations: The project was reformulated twice (1989 and in 1995). The former was in recognition of the chronic financial and institutional weaknesses of the public sector to manage the reproduction, distribution of pigs not to mention running the preparation and sale of meat products. The latter was part of a blanket reformulation of the entire old portfolio to make it the leading edge of the Bank's emergency strategy in Haiti at the time. The basic goal was to reactivate all nine existing projects (including this one) and streamline execution procedures in order to get the projects moving again as fast as possible and without obstacles to their execution.

New Goals: The reformulations radically reduced the objectives of this project to improving the hog gene pool by contributing to the creation of a new more resilient and faster reproducing strain rather than replacing the capital lost by the millions of poor farmers due to the eradication campaign. The public sector would produce about 1,200 improved breeders and build the infrastructure for their reproduction, distribution, slaughter and sale. However, management of the infrastructure would be passed to private entities. The focus on benefiting poor farmers was partially retained by giving that group access to 13,000 genetically improved hogs at subsidized prices. The provision of free imported feed to private multiplication centers was meant to create the basis for lowering breeder prices to poor farmers. Steps were also to be taken to protect the new strain from infection. A new self-financing vaccination system was to be put in place based on cost-recovery initiatives. Finally, the capacity of the Ministry to protect the new strain from infection was to be improved by building quarantine posts, training and setting up new systems and procedures.

Another Reformulation: However, instead of moving forward immediately to implement the new project design, only months after signature of the modificatory contract, in an audacious move, it was decided to effect a fundamental change in project design. Instead of reproducing breeders by importing feed and building 8 new public multiplication centers, as described in the loan contract, it was decided to just pay 13 existing private entities to produce the breeders using their own feed and their own facilities. The new outsourcing design cost less than the infrastructure one so surplus funds were generated. These were used to expand vaccination campaigns and build better slaughterhouses. The research center, already established with French Government assistance at Thomassin, was used to centralize production of the new genetic strain and the improved pigs were given to the 13 private multiplication centers. These centers then multiplied the improved hogs and sold them at subsidized prices to farmers associations and NGO's. The difference between the sale price and the production cost was financed by the Bank via cash transfers to the private centers. Although not contemplated by the loan contract this new design was effective in reproducing and distributing breeders.

Results:

The data to assess impact was never gathered, however, it is unlikely that any significant number of the poor farmers originally hurt by the eradication program ever benefited from the project. Since poverty has deepened and the price of hogs has risen, it is also likely that

the intended increase in consumption of animal protein has not been attained. It is also estimated that private interests used the enhanced breeders to eventually produce about one million pigs. In addition, a new network of slaughterhouses was developed that is privately operated and has contributed greatly to the availability of hygienically handled animal protein. Probably, the single most important contribution of the project was the introduction of a new strain of hog that is resilient to disease, consumes low-cost local materials and reproduces several times faster.

The final reformulation, though informal, was efficient since it produced benefits faster and at less cost. It would have taken at least 3 years to build and equip the 8 new public reproduction centers and rehabilitate 10 private ones, and set up a new feed importation system. The last contractual reformulation already contemplated having private interests manage the new public infrastructure so there was no benefit from the informal reformulation in this regard.

Despite these achievements, the informal reformulation had two basic flaws. The first was the absence of any plan to wean the system of the subsidy on which it was based. The system of giving improved breeders free of charge to private reproducers who then sold them at subsidized prices could only persist as long as the IDB loan resources were available. Without a new external source of support or the elimination of the subsidies, the system could not last. This problem was resolved after closure of the project. The system evolved away from the informal project design so that the private reproduction centers now pay the Government for the breeders, cash transfers to these centers have been eliminated; and real prices are now charged for improved pigs sold to the market. The second flaw was the absence of measures to maximize benefits to poor farmers. Farmers who could not afford normal pigs were probably excluded from the project since improved hogs were sold at the market price for normal pigs and local demonstration centers were never set up. Most benefits probably went to groups with the funds to buy normal pigs since they could replace them with improved ones for the same price. These farmers could have been from the low income group and they would have benefited from higher reproduction and more resilience. Furthermore, the post-project removal of the subsidy made the system sustainable but made it even harder for the poor to access better pigs.

The institutional reform to protect the new improved strain against endogenous and exogenous diseases was never put in place. The quarantine posts were mostly not even built. In addition, the cost recovery system that was at the heart of the vaccination component was never implemented. The upshot is that the valuable new strain of pig introduced by the project lacks an effective protection system. Effective control of cross-border infection and the capacity to control outbreaks remain rudimentary. Despite the fact that the quarantine system was never established, a modest improvement was obtained in Haiti's animal health services since the Ministry knows how to conduct preventive and reactive vaccination campaigns if it can get the money to finance them and its capacity for identifying diseases has been enhanced.

Internal controls were lax so the 13 private operators were selected without competition. In addition, the basis for cash transfers to these operators was not verified by any external entity. No record could be found of the farmers who actually received the improved pigs or the price they paid or whether they were poor. Likewise, the private operators of the new public slaughterhouses were not selected by a competitive process. Neither can any record be found of subsequent payments made by private slaughterhouse operators to Municipal authorities. Bank funds were used to finance activities that were not contemplated in the loan contract.

Conclusion: This PCR tells the tale of a project that evolved several times over two decades. It began as an urgent effort to replace income lost by millions of very poor Haitian farmers. It turned into an initiative to improve the private hog market by improving stock and facilitating private management. It was hounded by political turmoil throughout execution and the intended institutional reform was frustrated. Future interventions can certainly benefit from the lessons learnt here. The main ones are: i) Mechanisms for reaching final beneficiaries should be properly defined before starting execution; ii) The shift from emergency replacement of hogs to deepening the market for improved hogs had profound equity implications that should have been explicitly evaluated from the outset. iii) Fundamental reformulation of projects is often the most effective way to achieve objectives in a dynamic context, however, transparency demands that they be effected according to formal procedures for modifying contractual conditions. This will ensure not just transparency but also maximum use of the Bank's know-how. iv) Bank financing of subsidies requires much more rigorous controls than those used. v) Projects should not expand public infrastructure unless resources will also increase to maintain and operate them properly. vi) More attention should be paid to making sure cost-recovery mechanisms are not ignored. vii) Private sector leasing of public infrastructure to provide desired services can be useful.

Implementation and Assumptions Classifications: The final implementation classification of unsatisfactory is based mainly on the failure to respect the contractual stipulations determining eligible project activities and governing procurement and disbursement procedures. In addition, the new goal of a rapid response to the urgent situation in 1995 was not attained due to execution delays. With regard to the key assumptions about the context in which the project would be implemented: i) the eradication program was not complete when the project was ready to start; ii) the parallel credit component never materialized; iii) coordination with other public entities failed; and iv) no effective means of identifying project beneficiaries was ever developed.

Probability of Meeting Objectives: Finally, and despite the shortcomings in implementation and project assumptions it is probable that some of the modified main objectives could be achieved to a significant extent. However, it should be noted that this is mostly due to initiatives outside the context of the Project. i) The Ministry's institutional capacity to provide animal health services has been improved, however, its actual delivery ability is limited by: poor salaries that cannot retain competent staff; the failure to take key policy decisions; and the lack of funds to pay for materials and maintenance. ii) Small farmers now have significantly more sources of improved breeding stock and therefore their productivity is higher. Nevertheless, this cannot be attributed directly to the project approved by the Board since the sustained presence of these sources is due to radical departures from that project design. In addition, the new strain is not protected as planned and the self-financing vaccination system never materialized. iii) Breeding stock was produced and distributed to low income families in rural areas, however, it is likely that farmers who were least-well-off benefited most. It is probable that the poorest groups neither increased their access to improved hogs nor did they increase their consumption of animal protein as a result of the project. iv) The sanitary and hygienic conditions of the principal source of animal protein in rural and main urban centers has been improved for those with the ability to pay. The sustainability of this improvement is based mostly on the private operation of the new slaughterhouses. However, the cost-recovery system meant to finance ongoing maintenance and replacement of equipment and infrastructure was never put in place..

A. Succinctly present the project's objectives⁵.

There were two formal reformulations and a de facto one during execution and another after Bank financing expired.

The Original Objectives - 1983:

The original project objectives were: i) To improve the diet in rural areas by re-establishing the hog population in the country, which was almost completely exterminated to eradicate the African Swine Fever virus (ASF) and which is the principal source of animal protein for the rural sector; ii) to re-establish the living conditions of Haitian hog raisers to a level equal or higher than what is before the ASF virus invaded the country; iii) to improve the hog raising technology used by hog raisers, iv) to strengthen the preventive veterinary medicine service of the MARNDR, and v) to disseminate basic curative and preventive knowledge on hog breeding and raising.

These overall objectives were linked to the following specific goals: i) Build and equip 2 reproduction nuclei, 4 multiplication centers, 9 demonstration and distribution centers, 1 office for the project execution, 11 urban and 9 rural slaughterhouses and 14 wells. It was also intended to produce in the reproduction nuclei 6.000 hybrids per year, 13.000 stallions and sows in the reproduction centers, and 6.500 hybrids per year in the demonstration centers.

The First Reformulation - 1989:

In May 1989 the loan contract was modified for the first time. This was in recognition of the impossibility of actually producing that many pigs and the chronic institutional weaknesses of the public sector to manage the reproduction, distribution of pigs not to mention running the preparation and sale of meat products. The new objectives became: Contribute to and consolidate the country's animal health services; improve the pig breeding conditions of low income families; and improve the sanitary and hygienic conditions of the principal source of animal protein in rural and urban areas.

The new specific goals were: i) Construction of five animal health laboratories; and ii) the construction of 25 smaller slaughterhouses -10 urban and 15 rural- instead of the initial 20 big slaughterhouses -11 urban and 9 rural. Given the radical reduction of both objectives and investment activities it was decided to cancel US\$4.2 million (see table below). The project's budget was therefore modified from US\$23,2 million to US\$15,2 million and the Bank's financing from US\$17,4 million to US\$13,2million.

The Second Reformulation - 1995:

In March 1995 there was a blanket reformulation of all the Bank's old portfolio in Haiti. This project, along with all the others were thought to be able to start execution immediately and therefore constituted the leading edge of the Bank's emergency strategy in Haiti at the time. The basic goal was to reactivate all nine existing projects (including this one) and streamline execution procedures in order to get the projects moving again as fast as possible and without obstacles to their execution.

The new objectives became: i) Contribute to and strengthen the country's animal health services; ii) Assist small rural producers in identifying sources of breeding stock and

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.

producing hogs; iii) Produce and distribute breeding stock to low income families in rural areas, and iv) Improve the sanitary and hygienic conditions of the principal source of animal protein in rural and main urban centers.

The new specific goals included the following:

- i) the Executing Unit was replaced by a Coordination Unit (PDEP) better integrated within the structure of the Ministry to improve project supervision.; improve coordination with the rest of the ministry and provide for a sustainable improvement in the institutional capacity of the ministry.
- ii) The construction and implementation of 5 laboratories to improve animal health was replaced by the rehabilitation and equipping of the central animal health laboratory at Tamarinier to enhance its capacity to control major animal diseases;
- iii) The construction of slaughterhouses was reduced to 8 urban and 4 rural with the possibility of adding one more urban and five more rural ones if the first 12 were found to be acceptable;
- iv) The rehabilitation or construction of 8 rustic pig reproduction centers, the purchase of feed for these 8 centers and for 10 pre-existing ones⁶ and setting up and running small demonstration production modules;
- v) Animal health initiatives to control illness with national import and strengthening health diagnosis and monitoring. This included a new cost-recovery vaccination system; and
- vi) Training professionals, technicians, veterinary agents, and peasants in animal health and pig reproduction.

For ease of reference, the major changes introduced by each reformulation are summarized in the following table:

⁶ In 1987 the French Cooperation Mission started a swine repopulation program and constructed the primary reproduction center of Thomassin that was managed by the firm GME. This program established a network of 10 secondary reproduction centers that furnished imported breeders to the market (1.- EMAD, 2.- ASSODLO, 3.- SOE Bassin Bleu, 4.- SOE Aquin, 5.- SOE Les Cayes, 6.- COSOFICAPA, 7.- PRODEVA, 8.- LEON, 9.- Vallée de Jacmel, and 10.- Fond de Nègres). The French financing stopped during the embargo and never resumed. In 1995 most of the secondary centers but four (1.- SOE Les Cayes, 2.- LEON, 3.- Vallée de Jacmel, and 4.- Fond de Nègres) were still in good condition. After the second reformulation the program took responsibility for Thomassin and until 1998 trusted its management to the firm GME. Starting 1999 the project financed the feed for the center (procured locally) whilst the staff was provided by the government.

	Original Contract	Reformulation # 1	Reformulation # 2
Objectives	a) Improve the quality and quantity of meat consumption in the rural zones, and repopulate the country with pigs b) Reestablish and improve the quality of living of the Haitian pig farmers c) Improve the technology for pig breeding d) Reinforce the veterinary quarantine services of the MARDNR, and e) Disseminate the sanitary preventive measures for pig breeding	a) Contribute and consolidate the country's animal health services b) Improve the pig breeding conditions of the low income families c) Improve the sanitary and hygienic conditions of the principal source of animal protein in rural and urban centers	a) Contribute and consolidate the country's animal health services b) Assist the small rural producer in identifying and producing of local sources of pig breeding c) Produce and distribute among the low income families of the country pig stallions. d) Improve the sanitary and hygienic conditions of the principal source of animal protein in rural and urban centers
Goals	a) Build and equip 2 reproduction centers, 4 multiplication centers, 9 demonstration and distribution centers, 1 building for the project's executing unit, 20 (11 rural and 9 urban) and 14 wells b) Production in the reproduction centers 6.000 hybrid pigs per year and 13.000 sows per year in the multiplication centers; and distribute through the demonstration centers 6.500 hybrid pigs per year	a) Construction and equipping of 5 animal health laboratories, a set of 25 urban slaughterhouses, (10 urban and 15 rural) with the facilities for meat processing, 2 centers for artisan meat preparation and a building for the b) Importation and distribution nationwide of 10.000 tons of balanced food for pigs. c) Establishment of the national veterinary services in order to keep the country clean from exotic diseases and to help in the diagnose and pig prophylaxis d) The realization of approximately 175 training periods for technicians and pig farmers	a) Rehabilitation and equipping of the central laboratory of animal health, the construction of 12 slaughterhouses (8 rural and 4 urban) with the facilities for meat processing, and the rehabilitation of the executive unit's offices. b) The construction of 6 more slaughterhouses (1 urban and 5 rural) if the construction of the set of 12 has had a favorable opinion of the Bank c) The rehabilitation or construction of 8 centers of reproduction, the financing of their breeding costs as well as of the 10 existing ones; the installation and operation of small demonstration and production modules d) The execution the the required actions to control the three most important diseases and the reinforcement of the sanitary diagnose e) Training of professionals, technicians, veterinary agents and peasants in animal health and pig breeding. f) Acquisition of feed for the 8 reproduction centers to be built as well as for 10 existing ones, which will enable to sell hogs at subsidized prices, and the functioning of small demonstration units

B. Briefly describe the project's components⁷.

The original components were:

1. **Production:** Production of 6000 hybrids per year in the breeding centers and 13.000 hybrids (sows and stallions) per year from the multiplication centers; distribution of 6.500 hybrids (sows and stallions) per year through the demonstrations centers
2. **Technology transfer:** About 12.000 pig farmers and all middle level technicians were to benefit from the technology transfer which will be financed through the ATN/SF-2357-HA.
3. **Animal Health:** Strengthening the Veterinary National Service, particularly in quarantine and preventive aspects in order to prevent the introduction of exotic diseases and the dissemination of infecto-contagious and parasitic diseases.

⁷ "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.

After two formal reformulations, the components as described in the Modified Loan Contract are as follows:

1. **Animal Health:** Conceived to reinforce the National Veterinary Service and keep the country free of exotic illnesses by strengthening diagnostic structures, epidemiological monitoring and quarantine, as well as to expand the veterinary preventive assistance at the regional level, conduct an epidemiological survey and train mid-level staff.
2. **Pig Feed Importation:** That included i) Rehabilitation or construction of 8 reproduction centers for rustic piglets; ii) acquisition of feed for the 8 centers as well as for 10 pre-existing ones such that it will be possible to sell pigs at subsidized prices to small farmers; and iii) The functioning of small demonstration reproduction units.
3. **Slaughterhouses and other Sanitary Services:** Conceived to create a network of rural and urban slaughterhouses as well as other structures that will serve to increase hygiene and food safety in meat preparation, especially pork.

Training: Train about 1,300 selected producers to, in turn, train others in animal health and feeding. Also train about 500 extension agents of the Ministry.

C. Briefly describe the main assumptions⁸ 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.

Assumption Related to the Successful Implementation of Components:

1. The sentinel phase of the AFS eradication program has been successfully terminated.
2. Loan 699/SF-HA provides credit for farmers to purchase the hogs produced by the National Hog Restocking Program.
3. The Ministry of Agriculture (MARNDR) undertakes the necessary measures to allocate the production of the multiplication centers according to the demands.
4. Swine races with higher growth rates (performance) are introduced to respond to the demand of the semi-industrial sector.
5. The Ministry of Agriculture (MARNDR) reviews the former mandate of the sanitary protection unit in regard to the food quality control department (national laboratory of Tamarinier).
6. Competencies to be shared with the Ministry of Commerce are clearly defined.
7. It will be possible to identify and benefit the target population.

Assumptions Related to Development Objectives:

1. The Ministry of Agriculture (MARNDR) strengthens inter-sector communication with the Ministry of Public Health and Population (MSPP) to improve the national health control system.
2. The Haitian Government defines an appropriate meat importation policy.

⁸ 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).

3. Private pig producers and cooperatives will provide pigs to poor farmers at subsidized prices.
4. Low income families will be able to purchase the pigs as they become available from non-public producers.

II PROJECT RESULTS AND DEVELOPMENT OBJECTIVES

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

1. The actual level of achievement of project components:

Since there were two formal reformulations this section focuses on the components stated in the last reformulation of the loan contract. The titles for the components were retained from the first reformulation even though the subsequent reformulation made substantial changes in the content of each component.

Component 1. Animal Health

- The rehabilitation and equipping of the Tamarinier Laboratory was completed.
- Vaccination campaigns were (and still are) undertaken with the required frequency. However, the cost-recovery system for vaccinations was never put in place so there is no sustainable system for vaccinations. The upshot is that the Government is still relying on steadily dwindling public resources or donor largesse to finance vaccinations.
- Several epidemiological surveys were undertaken.
- The quarantine center of the airport of Port-au-Prince was constructed and equipped and that the quarantine post of the port of Port-au-Prince was rehabilitated and also equipped. However, a nationwide sanitary system was never established nor did the construction of the remaining three quarantine border posts ever start. As a result the Government was not able to strengthen or expand its quarantine system for the country. The main reasons were the lack of capacity of the Haitian government to coordinate actions between the National Police, the National Customs, and the ministries of Health, Interior, and Agriculture; and the arrears situation that produced delays in the project as well as the suspension of disbursements which ended finally in an abrupt cancellation of the project requested by the Haitian government.
- Since the quarantine system was not put in place it was clearly not possible to train the quarantine agents. Instead 1,200 technicians, veterinary agents and meat inspectors were successfully trained.

Component 2. Pig Feed Importation

i) Construction and Equipping of Multiplication Centers

None of the 8 multiplication centers was ever constructed, rehabilitated or equipped. Neither were these or the intended ten other centers ever provided with imported feed. Instead, 13 private secondary reproduction centers⁹ were selected to undertake the

⁹ Secondary Multiplication Centers of: 1.- DADY Ferme (Croix de Bouquets), 2.- Église Méthodiste (Viallet), 3.- SOE (Basin Bleu), 4.- SOE (Aquin), 5.- FERMAREV (Gressier), 6.- ASSODLO (Jacmel), 7.- COSOFICAPA (Paillant), 8.- Église Méthodiste (Jérémie), 9.- PRODEVA (Ennery), 10.- Église Méthodiste (Dory), 11.- Alex Aguerre (Bainet), 12.- MPP (Hinche), 13.- EMAD (Dondon)

reproduction activities. Of these 6 had previously been established by the French Cooperation before the embargo and 7 were added to the list according to their location, their production capacities, the condition of their infrastructure, their sanitary conditions and their willingness to operate on a non-profit basis.

ii) Importation of Purebreds

The importation of the 550 purebreds (Large White pigs) that was included in the initial project was never completed because these hogs were too delicate for the country's conditions and died a couple of weeks after their arrival. In their place, a new hybrid (Gascon, Chinese and Créole) was developed locally, by crossing stallions brought mainly from Guadeloupe with surviving Creole pigs. The introduction of improved genotypes diversified the genetic pool to create a hardy new race.

iii) Importation of Feed

No feed was imported. Acquisition of feed was not financed directly but instead it was included in the cost paid per piglet to the private centers. This was due to two main reasons: i) The amount of feed needed per month was too small to be economically feasible; and ii) the storage capacity in the centers was too small to stock the feed needed for an entire month. In addition, experiments with feed samples proved that the feed lost up to 40% of its nutritive value when stored for more than 30 days. Instead, the private multiplication centers sourced their own feed locally.

Component 3. Slaughterhouses and other Sanitary Services

From the initial set of 18, 17 slaughterhouses were completed and are functioning although only 5 are fully operational. The other 12 require some minor equipment. Fourteen are privately managed and the remaining three are handled by semi-private organizations. The construction of the remaining one (Croix de Bouquets) to complete the set of 18 was never begun due to the arrears situation and the sudden cancellation of the project by the government.

Component 4. Training

The training of 1,300 selected producers as well as the 500 extension agents was never accomplished. Instead 1,200 veterinary agents, 40 meat inspectors, and 10 technicians in bacteriological and parasitological analyses were trained

2. The currently expected level of achievement of project objectives:

Objective 1: Contribute to and strengthen the country's animal health services.

- While Bank funds were still available, the Bacterial Anthrax and The New Castle diseases were controlled nationwide.
- Vaccination campaigns were (and still are) undertaken with the required frequency, however, the goal of setting up a self-sustaining vaccination system was not met. The cost-recovery system was never put in place.
- A nationwide sanitary system was never established nor is there any semblance of a quarantine system. This means that the investments in creating and propagating a new strain of more productive and resilient pig is exposed to infection from abroad.

Objective 2: Assist small rural producers in identifying sources of breeding stock and producing hogs.

It is likely that small rural producers have been assisted in identifying sources of breeding stock and in producing hogs. The project significantly strengthened the system for multiplying improved breeders. There are now 13 private centers all over the country to which farmers associations and NGO's can turn to obtain improved hogs. To the extent that the new hogs reproduce much faster than normal pigs and that they are also more resilient to disease, it is also likely that the project provided for significant productivity increases for those who acquired the improved pigs. Training was to have been key. However, the campaign to train poor farmers never was executed. Even the demonstration centers designed to be set up close to farmers were abandoned without a single one being established.

Objective 3: Produce and distribute breeding stock to low-income families in rural areas,

The goal of providing poor farmers with disease-resistant breeders at subsidized prices may have been accomplished to some degree. It is estimated that about 14,000 were distributed to farmer associations and NGO's for subsequent sale to farmers. However, since the project execution unit did not supervise, control or collect data on the sale of pigs to farmers it is not possible to say with certainty which group purchased the hogs from the NGO's. It is also unknown whether there was any secondary market in the hogs whereby those who first bought them from the NGO's at subsidized prices may have re-sold them at closer to market prices. Nevertheless, the sustained presence of these sources of improved hogs is due to a radical ex-post departure from the project design. In addition, it is likely that low income farmers benefited, but not the poorest group. The poorest groups neither increased their access to improved hogs nor did they increase their consumption of animal protein as a result of the project.

Objective 4: Improve the sanitary and hygienic conditions of the principal source of animal protein in rural and main urban centers.

Ownership of the slaughterhouses has been transferred to the Municipalities and these, in turn, selected private operators to run most of them. The system for selecting the private operators is undocumented. The supply of higher quality meat products has been expanded for those able to pay for it. Accordingly, it can be asserted that the sanitary and hygienic conditions of the principal source of animal protein in rural and main urban centers has definitely been improved. However, the sustainability of this improvement is questionable. Private operation of the new slaughterhouses ensures they will function for a time, however, the failure by Municipalities to collect any rents from these private operators means that there is no basis for financing replacement of equipment and infrastructure when it wears out. As it is, only five of the 17 slaughterhouses are fully functional since the others lack all the equipment intended and the private operators are not willing to take up the slack.

Protein Consumption: Although this ceased to be a goal of the project under the second reformulation, it is noteworthy that there has been no reduction in prices that would have made meat protein more accessible to the poor. Accordingly, it is unclear to what extent the project was able to achieve the original goal of increasing the consumption of animal protein by poor families. In addition, it has not been possible to avoid political factors playing a determining role in the selection of private operators.

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:

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

i) De facto Reformulation of Multiplication Centers Component

Rather than build public reproduction centers for management by private concerns, as laid out in the modified Loan Contract, it was decided to provide the improved hogs by other means. About six months after the last reformulation was signed, it was decided to set up a system whereby 13 handpicked, pre-existing private facilities would be used for multiplying the hogs rather than build new centers. Under this de facto reformulation the Government center at Thomassin would produce genetically improved pigs and provide them free-of-charge to private multiplication centers. The latter would then reproduce the breeders and sell them at subsidized prices to undetermined farmers' associations and NGO's. Bank loan funds were used to reimburse the private centers for the difference between their reported cost to produce the breeders and what they were supposed to sell them for. Data collection under this informal project design went no further than the farmers associations and NGO's and did not reach as far as the final beneficiaries. Accordingly, it is hard to say to what extent poor farmers benefited or which ones benefited.

The main motivating factors behind the informal reformulation were: the relatively long time that procurement, construction and start up of the 8 centers would have taken (almost 3 years in total); and the lack of financial feasibility of importing feed.

The de facto system for providing improved hogs at subsidized prices to poor farmers was structured as follows:

- i) The Government's reproduction center at Thomassin was used to produce core breeding stock. This is where the new strain was produced. This meant the project had to finance the acquisition of the pigs, the creation of the hybrid, feed, materials and operating costs. The breeders were then given free of charge to the 13 private multiplication centers.
- ii) The Executing Unit then negotiated with each private center to agree on a unit cost for multiplication of breeders for sale. The centers then signed contracts that committed them to comply with minimum technical specifications that referred basically to the sanitary conditions to be met, the number and kind of vaccines needed, the age and weight that each breeder had to have prior to its distribution, and the type of feed that was to be used in every stage of their growth. For identification and control, the centers were to earmark the pigs with tags provided by the project's executing unit.
- iii) The breeders were sold by the private centers to farmers associations and NGO's at prices¹⁰ that were between 30% and 40% of the production cost, this represented a subsidy of 60% to 70%. The private centers were supposed to present data on each distributed breeder (weight, race, age, etc.) as well as with the basic data of the final beneficiary (name, and location).

¹⁰ Selling price was set by the project at 20 Gourdes per kilogram. The normal weight of a breeder to be distributed was 15 kg., so in average the selling price of a breeder was of 300 Gourdes (approximately US \$17 in 1996).

- iv) Each private center had to present a quarterly report of its production and sales. Each had to show details on the pigs sold as well as whom they sold them to. Since the sales price was fixed by the Executing Unit at the same level for all 13 centers payment to each center was based on the difference between the individual production price and the fixed sales price. The project paid the 13 private centers the difference between their projected production cost and the fixed sales price.

It is noteworthy that during the time this production/distribution scheme was implemented there were no other genetically improved breeders available in the market. Additionally, the average market price of a normal piglet of similar age and weight was approximately 300 Gourdes (US \$17.00 in 1996). This is why the selling price for improved pigs was set at US\$17.00 so that at no more than the price of a normal piglet a farmer could obtain a genetically improved breeder. Therefore the risk of buying the breeders and reselling them to the market was eliminated.

The average contract amount with each private center was approximately US\$63,000. This means that with a relatively low cost (about US\$820,000) the goal of distributing the breeders all over the country was completed without building any infrastructure, purchasing any equipment or importing any feed. The savings were used to expand the vaccination campaigns and build better slaughterhouses. Even so, the goal of running small demonstration centers close to poor farmers was not met since the private centers failed to comply with this part of their contracts.

With regard to the project's budget, the following chart summarizes the basic differences between the intended financing plan according to the loan contract and what was actually executed.

LOAN 738/SF-HA: DETAIL OF EXPENSES
(US Dollars)

CATEGORIES OF INVESTMENT	REFORMULATED BUDGET AS OF 1995		DISBURSED AMOUNT	
01.00.00- ENGINEERING AND ADMINISTRATION	1,045,033.00		1,621,137.15	
01.01.00- SUPERVISION	304,649.00		796,302.88	
01.01.01- SUPERVISION	163,000.00		653,653.88	
01.01.02- PREVIOUS EXPENSES	141,649.00		142,649.00	
01.02.00- ADMINISTRATION	740,384.00		824,834.27	
01.02.01- PERSONNEL	328,000.00		412,450.27	
01.02.02- PREVIOUS EXPENSES	412,384.00		412,384.00	
02.00.00- DIRECT COSTS	8,516,246.00		8,238,543.73	
02.01.00- CONSTRUCTIONS	2,212,600.00		2,923,208.59	
02.01.01- SECONDARY MULTIPLICATION CENTERS	1,080,000.00		-	
02.01.02- TAMARINIER LABORATORY	177,000.00		320,813.97	
02.01.03- SLAUGHTERHOUSES	705,600.00		2,095,468.38	
02.01.04- EXECUTING UNIT BUILDING	250,000.00		125,828.53	
02.01.05- QUARANTINE STATION			298,054.29	
02.01.06- EMPSA			55,064.70	
02.01.07- VETERINARY CLINIQUE			27,978.72	
02.02.00- INPUTS AND MATERIALS	3,398,807.00		2,888,576.83	
02.02.01- FEED AND MEDICINES FOR CMS	1,623,000.00		518,618.64	
02.02.02- VACCINATION CAMPAIGNS	1,084,000.00		1,682,145.61	
02.02.03- TRAINING	571,000.00		563,020.79	
02.02.04- SLAUGHTERHOUSE MAINTENANCE	74,000.00		77,984.79	
02.02.05- PREVIOUS EXPENSES	46,807.00		46,807.00	
02.03.00- MACHINERY EQUIPMENT AND VEHICLES	2,904,839.00		2,426,758.31	
02.03.01- EQUIPMENT FOR MULTIPLICATION CENTERS	108,000.00		-	
02.03.02- EQUIPMENT FOR TAMAR. LABORATORY	670,000.00		359,605.04	
02.03.03- EQUIPMENT FOR SLAUGHTERHOUSES	259,000.00		758,911.35	
02.03.04- OTHER EQUIPMENT	597,839.00		294,846.64	
02.03.05- VEHICLES	1,079,000.00		837,043.28	
02.03.06- SPEAR PARTS AND ACCESORIES	191,000.00		176,352.00	-
03.00.00- ORDINARY COSTS	1,375,343.00		1,109,545.21	
03.01.00- OPERATIONAL EXPENSES (TRIPS AND PERDIEMS)	903,653.00		995,067.65	
03.02.00- FUELS AND LUBRICANTS	471,690.00		114,477.56	
03.03.00- REAL ESTATE			-	
06.00.00- MISCELLANEOUS	1,733,378.00			
06.01.00- UNFORESEEN COSTS	1,293,378.00			
06.02.00- COST ESCALATION	440,000.00			
87.00.00- FINANCIAL COSTS	530,000.00		209,277.46	
87.01.00- INTERESTS	398,000.00		77,277.46	
87.02.00- CREDIT COMMISSION	-			
87.03.00- F.I.V.	132,000.00		132,000.00	
89.00.00- REVOLVING FUND (NOT RECOVERED)	-		134,276.94	
90.00.00- AMOUNT CANCELLED	-		1,887,219.51	
TOTAL	13,200,000.00		13,200,000.00	

The basic differences between what was approved and what was executed can be explained in the following way:

- i) The engineering and administration category experienced an increase due principally to the escalation of supervision expenses. This occurred since supervision costs are a function of changes in both construction costs and execution delays mainly in the slaughterhouse component. Additionally, supervision was required to monitor the de facto secondary reproduction system and to monitor the training sub-component.
- ii) The money that was saved by not constructing the secondary reproduction facilities and not importing the feed (US \$1,08 million in construction plus US \$1,1 million in feed, and US \$0,1 in equipment), was used basically in the slaughterhouse subcomponent which increased from US \$0,70 million to US

\$2,09 million; in the vaccination campaigns (that increased from US \$1,08 million to US \$ 1,68 million), and in the laboratory of Tamarinier.

- iii) The money that was saved in other equipment, vehicles, fuels and lubricants and in the equipping of the Tamarinier laboratory was also used in the equipping of the slaughterhouses. Even so, only five of the 17 slaughterhouses constructed by the project are fully functional due to missing equipment.
- iv) When the project was canceled by the Government in August 2002, the amount cancelled (approximately US \$1,88 million) was practically the same to that initially allocated in this category (US \$1,73). This means that had the project not been canceled, there would have been enough resources as to finish the construction of the remaining slaughterhouse (to complete the set of 18); and fully equip the 12 missing equipment to be fully functional. There would even have been enough to build the three quarantine posts and to reinforce the quarantine system (that should have been established).

i) Post- Execution Reformulation of Multiplication Centers Component

In 2001 when the Government stopped servicing its debt with the Bank and in 2002 when it unilaterally cancelled the remainder of the Bank financing the main source of financing for the subsidized reproduction scheme was removed. It was clearly impossible for the Government to use fiscal resources to make the transfers to the center at Thomassin to produce the breeders; provide the breeders free of charge to private centers and then pay the private centers to sell the improved hogs at below cost. Accordingly, the system had to either evolve or collapse. The former was the case. The center at Thomassin started charging for the improved hogs and has been able to operate on a sustainable basis with the financial aid of the government. The private multiplication centers also eliminated the price subsidy and no longer expect any financial transfers from the Government. This means, that although it contradicts project design and is subsequent to the end of execution, the current system allows for a sustainable facet of the hog market to continue providing genetically improved breeders to those able to pay. The removal of the subsidies has probably put hog protein out of the reach of the very poor; however, it does make the new market for improved hogs sustainable.

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

The data to assess impact was never gathered, however, it is unlikely that any significant number of the poor farmers originally hurt by the eradication program ever benefited from the project. Since poverty has deepened and the price of hogs has risen, it is also likely that the intended increase in consumption of animal protein has not been attained. Even so, a new more resilient strain of hog that reproduces three times faster was introduced. It is also estimated that private interests used the enhanced breeders to eventually produce about one million pigs. In addition, a new network of slaughterhouses was developed that is privately operated and has contributed greatly to the availability of hygienically handled animal protein. Probably, the single most important contribution of the project was the introduction of a new strain of hog that is resilient to disease, consumes low-cost local materials and reproduces several times faster.

The final reformulation, though informal, was efficient since it produced benefits faster and at less cost. It would have taken at least 3 years to build and equip the 8 new public reproduction centers and rehabilitate 10 private ones, and set up a new feed importation system. The last formal reformulation already contemplated having private interests manage the new public infrastructure so there was no benefit from the informal reformulation in this regard.

Despite these achievements, the informal reformulation had two basic flaws. The first was the absence of any plan to wean the system of the subsidy on which it was based. The system of giving improved breeders free of charge to private reproducers who then sold them at subsidized prices could only persist as long as the IDB loan resources were available. Without a new external source of support or the elimination of the subsidies, the system could not last. This problem was resolved after closure of the project. The system evolved away from the informal project design so that the private reproduction centers now pay the Government for the breeders, cash transfers to these centers have been eliminated; and real prices are now charged for improved pigs sold to the market. The second flaw was the absence of measures to maximize benefits to poor farmers. Farmers who could not afford normal pigs were probably excluded from the project since improved hogs were sold at the market price for normal pigs and local demonstration centers were never set up. Most benefits probably went to groups with the funds to buy normal pigs since they could replace them with improved ones for the same price. These farmers could have been from the low income group and they would have benefited from higher reproduction and more resilience. Furthermore, the post-project removal of the subsidy made the system sustainable but made it even harder for the poor to access better pigs.

The institutional reform to protect the new improved strain against endogenous and exogenous diseases was never put in place. The quarantine posts were mostly not even built. In addition, the cost recovery system that was at the heart of the vaccination component was never implemented. The upshot is that the valuable new strain of pig introduced by the project lacks an effective protection system. Effective control of cross-border infection and the capacity to control outbreaks remain rudimentary. Despite the fact that the quarantine system was never established, a modest improvement was obtained in Haiti's animal health services since the Ministry knows how to conduct preventive and reactive vaccination campaigns if it can get the money to finance them and its capacity for identifying diseases has been enhanced.

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

Yes. The outbreak of the Classical Porcine Pest that occurred in 1996, called for an emergency -and unanticipated- vaccination campaign that was organized and financed by the project. At the end, although the disease was not eradicated, it was confined to certain areas where it could be treated until it practically disappeared.

An unexpected result from the de facto reformulation was the rehabilitation and equipping of the École Moyenne de Production et de Santé Animal (EMPSA) that allowed the preparation of 30 technicians per year in porcine reproduction and animal health who upon termination of their studies were immediately posted to their duties all over the country.

A third unexpected, positive result was the response from the private sector to participate in the hog multiplication activities by providing privately owned reproduction facilities for the project. This eventually created the base for a sustainable new facet of the hog market created after the project had been closed.

A fourth result was the development of “new” pig strains (hybrids) that combined the advantages of: the size of the Gascon and Large White, the fertility of the Chinese, and the resistance to the environment of the Créole pigs. The new strain is hardy and more productive.

The last positive unexpected result is the pilot production of energy from pig waste through a biogas generation plant that is being financed by another operation (ATN/SF-7763-HA).

- 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).**

Despite the shortcomings in implementation and project assumptions it is probable that some of the modified main objectives could be achieved to a significant extent. However, it should be noted that this is mostly due to initiatives outside the context of the Project. i) The Ministry's institutional capacity to provide animal health services has improved marginally, however, its actual delivery ability is limited by: poor salaries that cannot retain competent staff; the failure to take key policy decisions; and the lack of funds to pay for materials and maintenance. ii) Small farmers now have significantly more sources of improved breeding stock and therefore their productivity is higher. Nevertheless, this cannot be attributed directly to the project since the sustained presence of these sources is due to a radical ex-post departure from the project design. iii) It is likely that farmers who were already better-off benefited most. The poorest groups neither increased their access to improved hogs nor did they increase their consumption of animal protein as a result of the project. iv) The sanitary and hygienic conditions of the principal source of animal protein in rural and main urban centers has most definitely been improved for those with the ability to pay. The sustainability of this improvement is based mostly on the private operation of the new slaughterhouses. However, the cost-recovery system meant to finance ongoing maintenance and replacement of equipment and infrastructure was never put in place.

The final implementation classification of unsatisfactory is based mainly on the failure to respect the contractual stipulations determining eligible project activities and governing procurement and disbursement procedures. In addition, the new goal of a rapid response to the urgent situation in 1995 was not attained due to execution delays. With regard to the key assumptions about the context in which the project would be implemented: i) the eradication program was not complete when the project was ready to start; ii) coordination with other public entities failed; iii) no effective means of identifying project beneficiaries was ever developed. iv) The credit to help poor farmers acquire the improved hogs never materialized. It was to have come from a component of loan 699/SF-HA. Based on the PCR for that project it was a US\$7.0 million program (US \$3,96 million from the Bank and US \$3.04 million from local counterpart) allocated through 3 main credit lines. The following can be said:

- a) The “rehabilitation” credit line provided 9.000 beneficiaries with agricultural goods such as fertilizers, seeds, pest controllers, and only a little amount (not specified) was given for soil preparation. The individual amount allocated per producer was around US \$330,--

- b) The “oriented” credit line provided 5.324 individual producers or small associations with financial resources that were dedicated mostly to the procurement of agricultural machinery. The average credit amount was US \$900,--.
- c) The “autonomous” credit line provided only 80 beneficiaries with an average amount of US \$250,--. Its use is not established in the PCR.

From this, it is clear that the agricultural credit component of loan 699/SF-HA (last disbursement date December 6, 1990) did not contribute as foreseen to providing the peasants with the necessary funds for them to buy the piglets that were to be produced with resources of the loan 738/SF-HA.

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

The lack of proper quarantine measures is a threat not only to the country but to all neighboring ones especially the Dominican Republic. This is compounded by the failure to carry out training and the decision to abandon the self-financing vaccination system. The system for reproducing and distributing improved hogs to low income farmers has found some sustainability, but that was achieved outside the project design.

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.

The original project did include an analysis of the project's internal rate of return (IRR). When all direct benefits and economic costs (excluding the benefits to consumers) were included, an IRR of 13.2 was obtained. The net present value generated (using a discount factor of 12%) was US\$780.000 in a ten-year evaluation period. When a fifteen-year evaluation period was used, the economic rate of return increased to 22.2% and the present net value (12% discount factor) to US\$ 11.9 million.

When the benefits to consumers were taken into account, the internal rate of return was calculated at 19.6% and the net present value at US\$5.1 million (discounted at 12%).

The original economic analysis reflected the decision to work with the traditional structure of the market for hogs that was based on small family operations. The analysis assumed that the project would be able to ensure that the distribution of hogs per farm would be similar to that existing before the eradication program. In addition, the technological solutions provided by the project for reproducing pigs and animal husbandry in general would be consistent with the traditional techniques for hog raising that go back hundreds of years. This background would be used as the basis for improving technology and the adoption of procedures for increasing family incomes with limited investments. In order to ensure this, prior to the first disbursement, the Ministry was expected to present an operating manual to the satisfaction of the Bank that the low-income farmers would be given priority in receiving hogs produced by the project.

¹¹ If staff of the country office do 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).

Neither of the two reformulations recalculated the project's IRR. This means that there is no point of reference to compare the viability of the project today with what it was estimated to be when the reformulations were approved by the Board. Even so, the project design at the time the project was closed was analyzed, as was the experience up to the last disbursement. Based on this, the current calculation of the project's IRR gives a global figure of 8.73%. This estimate is of little usefulness for comparisons since it reflects the feasibility of a project that is substantially different both from the one approved by the Board and also differs from the one that evolved only after the project was closed.

The original economic feasibility was conducted for a project that sought to preserve the traditional structure of the hog industry, benefit the poor farmers hurt by the eradication program and rely on public provision of services and hogs. The recent economic feasibility was conducted for a project that sought to modify the market for hogs, distribute breeders to farmers and work through non-public entities for reproduction and sale of hogs.

III CHANGES IN THE ORIGINAL OBJECTIVES, COMPONENTS AND ASSUMPTIONS

A. Did any significant changes occur in the project's objectives, components or assumptions during execution (after project approval)? If so, describe these changes and provide your assessment as to why the changes were required.

Original Goals: At first the idea was to produce over 1.5 million pigs and get them to the target population: the millions of poor peasants devastated by the eradication program. There was also an overall intention to increase the quality and quantity of animal protein consumed by the poor. The project was to have started as soon as the eradication program was officially completed. However, it fell victim to the social and political upheavals of the time and did not really get underway until 1995 when it was clearly too late to help the original target population. Even the credit program set up in a parallel loan to help poor farmers acquire new pigs never made a single loan to this end. In fact, there never was a system for identifying the final beneficiaries or any defined mechanism for getting the pigs to them. Even if the beneficiaries had been identified and a delivery mechanism established, the project components could never have produced the intended goal of 1.5 million pigs.

Two Reformulations: The project was reformulated twice (1989 and in 1995). The former was in recognition of the impossibility of actually producing that many pigs and the chronic institutional weaknesses of the public sector to manage the reproduction, distribution of pigs not to mention running the preparation and sale of meat products. The latter was part of a blanket reformulation of all the old portfolio carried out in 1995 that constituted the leading edge of the Bank's emergency strategy in Haiti at the time. The basic goal was to reactivate all nine existing projects (including this one) and streamline execution procedures in order to get the projects moving again as fast as possible and without obstacles to their execution.

New Goals: The objectives were radically reduced to improving the hog gene pool by contributing to the creation of a new more resilient and faster reproducing strain rather than replacing the capital lost by the millions of poor farmers due to the eradication campaign. The public sector would produce about 1,200 improved breeders and build the infrastructure for their reproduction, distribution, slaughter and sale. However, management of the infrastructure would be passed to private entities. The focus on benefiting poor farmers was partially retained by giving that group access to 13,000 genetically improved

hogs at subsidized prices. The provision of free imported feed to private multiplication centers was meant to create the basis for lowering breeder prices to poor farmers. Steps were also to be taken to protect the new strain from infection. A new self-financing vaccination system was to be put in place based on cost-recovery initiatives. Finally, the capacity of the Ministry to protect the new strain from infection was to be improved by building quarantine posts, training and setting up new systems and procedures.

Another Reformulation: However, instead of moving forward immediately to implement the new project design, only months after signature of the modificatory contract, in an audacious move, it was decided to effect a fundamental change in project design. Instead of reproducing breeders by importing feed and building 8 new public multiplication centers, as described in the loan contract, it was decided to just pay 13 existing private entities to produce the breeders using their own feed and their own facilities. The new outsourcing design cost less than the infrastructure one so the surplus funds were used to expand vaccination campaigns and build better slaughterhouses. The research center, already established with French Government assistance at Thomassin, was used to centralize production of the new genetic strain and the improved pigs were given to 13 private multiplication centers. These centers then multiplied the improved hogs and sold them at subsidized prices to farmers associations and NGO's. The difference between the sale price and the production cost was financed by the Bank financing in cash transfers to the private centers.

B. 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.

C. 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										
	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Development Objectives (DO) [HP, P, LP, I]											
Implementation Progress (IP) [VS, S, U, VU]											
Probability of Assumptions holding true [H, L]											

It is necessary to explain the reason for the difference in the classification of this project in this PCR and the classifications in the PPMR's. In the first place, it was only while preparing the PCR that it was discovered that the project being executed was radically different from the one described in the modified Loan Contract. It was at that time that stock was taken of the various contract clauses that had never been complied with. The revised classification of the project reflects a profound re-assessment of the project actually being implemented vis-à-vis the goals, components and conditions presented in the modified loan contract.

In some ways the de facto reformulation was an improvement on the formal one, however, we are mandated to either implement what is agreed in the Loan Contract or to recommend the modification of the contract if deemed necessary. In this case, modification of the project was deemed necessary, however, the contract was not modified. Finally, several of the key aspects that give sustainability to the system as it exists today came about only after closing the project.

IV. 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?**

No. Even though the project's objectives were understandable and even laudable given the country's situation back in 1983, the project overestimated its goals as well as the Ministry of Agriculture's institutional capacity to manage and sustain such an ambitious initiative. This situation was reflected during the first 5 years of the project's execution, when it was supposed to be completed, but less than 8% of its total amount was disbursed.

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

No. The original components were ill defined and did not match the ambitious objectives. Neither did they take into account the context in which the project would be executed.

The project was also mistakenly classified as an Investment Project when it should have been a Global Project, since the majority of its components were not completely defined or designed prior to the project's approval.

3. **Were project assumptions correctly identified and realistically assessed? Were they adequately covered by conditionality in the loan contract to mitigate risks? Were they adequately assessed in the project's design? If not, explain.**

With regard to the key assumptions about the context in which the project would be implemented: i) the eradication program was not complete when the project was ready to start; ii) the parallel credit component never materialized; and iii) no effective means of identifying project beneficiaries was ever developed.

The institutional weakness of the Ministry was meant to be overcome by a parallel TC. In 1984, the Bank approved a non-reimbursable technical cooperation (ATN/SF-2357-HA) to strengthen the ministry's capacity to manage a project of this scope. In addition to bringing new systems, the TC also provided the technical specialists needed for project execution.

Like the loan, this technical cooperation of US \$910,000.-- was also modified two times (in April 1989 and April 1995) and after several execution and disbursement extensions, due to the lack of capacity of the executor to commit and use the funds, it was finally cancelled in September, 2001 with an available amount of US \$367,854.34 that represented around 40% of the approved amount.

Except for the know-how that the technicians hired under this ATN left with some of the MARNDR's officers, real strengthening of the ministry was not achieved. However, those officers did pick up the know-how to manage a major project.

The eventual problems in achieving coordination between the Ministry of Agriculture and other governmental entities in order to establish a sanitary and quarantine system were never included in the institutional analysis.

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

The design of the reproduction component was inconsistent with the financial and institutional capacity of the Ministry.

A design aspect that contributed to the partial success of the slaughterhouse component was the involvement of the private sector in their operation.

However, even the two reformulations still overlooked the inability of the government to take policy decisions needed to put cost-recovery systems in place and set up prevention and disease management systems.

The project was not designed to provide the rapid response called for by the 1995 reformulation.

The project was classified as an investment project although it was clearly global in nature. In general, the project's components were not completely designed prior to the project's approval. This caused a very slow start up that ended up with the first the modification of the loan in 1989 and the cancellation of US \$ 4,2 million due to its low performance. In 1987 it also triggered the French Cooperation Mission to launch a swine reproduction program that built the primary reproduction facilities of Thomassin and established a secondary reproduction network of 10 secondary reproduction centers.

Perhaps one of the most important flaws in execution was the failure to design a system to reach the target population.

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

A key factor in the project's relative success was the coordinating unit (PDEP) that was in charge of its management. This unit had the capacity not only to manage the project in very good technical and financial ways, but often served as a bridge between the beneficiaries and the Ministry of Agriculture.

The reliance on a separate project (financed by 699/SF-HA) to provide the credit needed by poor farmers to purchase the improved pigs was a mistake. No credit was ever provided from this source.

In the slaughterhouse component sites were selected based on pragmatic criteria. Among the most important criteria for this purpose the following can be included; i) the number of heads slaughtered per day; ii) the availability of a public market within a radius of 1 km. of the proposed site; iii) the number of people to be served by the new facility; iv) the existence or not of public slaughter facilities in the vicinities; and v) the willingness of the local authorities to provide the land and public services (mainly water, access roads and electricity) in the sites.

The 1995 informal reformulation eliminated building 8 secondary reproduction centers and importing feed for 18. The savings were used to finance a new subsidized production/distribution system and expand the slaughterhouse component. After the project was closed the system evolved again in order to survive. At the present time pigs are still being produced at the primary center of Thomassin but are no longer being distributed at no cost to the secondary reproduction facilities. Instead a production cost has been established which in fact is still lower than the market one, since the primary center is a non profit entity. The CMS's, in turn, have been forced to eliminate the subsidy to the distribution and are selling the pigs at almost their market price. The restriction to sell the pigs to poor farmers only has also been waived, as well as the control that was formerly undertaken by the project's executing unit.

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 execution of the project spanned one of the most dramatic periods in the recent history of Haiti. It was executed in a fast changing context of social upheaval, political crisis and economic decline. These exogenous factors had an unavoidable negative impact on project execution. Launched under the Duvalier dictatorship, the project was deeply affected by the rebellion that removed him from power in 1986. This was followed by five years of crisis until a democratic government was finally elected in 1990. The project was reformulated to adjust to the new context; however, the government was ousted by a military coup in late 1991. The project lay dormant for three years during the ensuing international embargo until a military intervention in 1994 returned the democratic government to power. A second reformulation was then needed to adjust the project to the prevailing conditions. Most execution took place after that point, however, the political crisis continued, as did the economic decline.

Since the project's approval (December 1983), it took 7 months to be ratified (July, 1984) and six more to be eligible for disbursements (January 1985). One of the most difficult prior condition to be fulfilled was to comply with the International Zoo-sanitary Code and to declare Haiti free from the African Porcine Pest (October 1984). Once this condition was satisfied, the executing unit was conformed, the operation manual was completed (November 1984); the names and signatures of the officers that were going to represent the government in the relationship with the Bank as well as the initial calendar for the project execution were submitted (December 1984); and the two fiscal accounts –for the two loans currencies- were opened (January 1985).

In the first years that followed the project's approval, it turned out to be difficult to put all the machinery to work in such an ambitious endeavor. Even though the technical cooperation (ATN/SF-2357-HA) that was launched to provide the necessary assistance to the ministry provided the funds for this purpose, it was hard to identify and select the professionals, both national and international, that were to work for the project. Moreover, time and resources had to be devoted to complete the studies of some components and thereafter to launch the corresponding activities.

Between 1985 and 1989 (the time by which the project should have been finished) only two cash disbursements were made, which originated several intermediate justification of funds. Procurement was slow, the supply of qualified consultants was low as well as the managing skills of the executing unit.

Starting in 1990, and thanks to the first reformulation, things began to speed up but unfortunately ground to a halt again in late 1991 until the 1995 reformulation. Only a few months after signature of this second reformulation, it was decided to modify the project informally. Instead of producing breeders by building 8 new public multiplication centers and rehabilitating 10 private ones, it was decided to just pay existing private interests to produce the breeders through 13 existing private multiplication centers. These centers were then paid to reproduce enhanced breeders for sale at subsidized prices to farmers associations and NGO's. This modification radically changed the project design, the financing plan and the investment activities, but made it possible to achieve the target number of genetically improved hogs faster and without the need to build new infrastructure that would probably not have been maintained.

The modification was efficient since it took account of the institutional weakness of the Government. In addition, the latter would probably have had constant problems finding the resources to manage the centers. Also, once the Bank funds were gone the Government would not have had the internal resources needed to keep the system running.

In 1996 the outbreak of the Classical Porcine Pest presented a challenge to the project. Additional funds (from the non specified category of investment) had to be allocated to vaccinate infected livestock and to finally control the disease.

Some land title problems appeared when identifying the sites for the slaughter facilities and the quarantine posts that were going to be furnished by the program. This situation caused delays until the legal affairs were solved.

With regard to the establishment of the quarantine system, as described before, the coordination between governmental agencies never took place, despite the

Bank's efforts to achieve this objective (letters sent to the ministries, meetings held for that purpose, etc.).

All these situations diverted the Bank's attention from accomplishing the project's development objectives into trying to achieve the objectives of each of its components. No action was taken to refocus the project into its development objectives.

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

No, perhaps with the exception of the reformulated animal health component, where despite external inconveniences caused by the political situation, embargo and arrears, the rehabilitation of the laboratories and the vaccination campaigns were delivered and responded to the outbreaks of traditional animal diseases. These efforts were specific to short term emergencies and did not lead to a sustained ability to deal with such demands. The problem was the failure to implement the cost-recovery initiatives designed into the component.

Several activities were never completed. None of the reproduction centers were ever built. None of the feed was ever imported. The quarantine centers were never established. Only 5 of the 17 slaughterhouses built by the project are fully functional since they were never fully equipped. The cost-recovery mechanisms for the slaughterhouse component was never put in place.

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

The project in its current state could be improved by the following:

1. Set up the quarantine system.

In order to complete the component of sanitary and animal health, a strong commitment and willingness of the government to establish a quarantine system has to be achieved. Once given that, since the Bank's resources are no longer available, new financial resources have to be identified so that thereafter the construction of the border quarantine posts, specially in Ouanaminthe, and Malpasse can be started. Furthermore, quarantine control posts at the ports of Cap Haitian, Miragoane, and Port-de-Paix will also have to be implemented.

2. Maximize Slaughterhouses Use

The 12 slaughterhouses that are not fully functional due to lack of equipment should be fully equipped. A key condition for doing so would be the establishment of a transparent system for cost-recovery. Private operators should be selected using transparent procedures and they should pay the municipality for leasing the premises. In addition, it would be desirable but not crucial, to build the final slaughterhouse at Croix de Bouquets and perhaps two others in Fond des Nègres and Jacmel.

3. Verify Access of Poor to Improved Pigs

Given the increased cost of improved pigs and the absence of effective mechanisms to ensure access by the poorer farmers it would be useful to determine to what extent this group is able to access the new market. A system should be set up to ensure the poor can access the market. It may also be of historical and/or technical interest to find out the fate of the original project target population. What ever happened to the people originally devastated by the eradication program?

4. Verify Animal Protein Consumption by Poor

The original concern with increasing the consumption of animal protein by the poor to at least the absolute minimum established by the U.N. should be retained. A system should be set up to estimate the extent to which Haiti complies with this standard. It should be possible to identify groups at risk and these should be provided with urgent dietary assistance.

5. Set up Cost-Recovery for Vaccinations

The Ministry is strapped for funds. It is urgent that the cost-recovery system be put in place. Without it, the Government will not be able to provide the protection needed.

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?)**

1. Financial Arrangements

Payments by the Bank to private reproduction centers was not contemplated in the Loan Contract. Nevertheless, a system was set up to determine the amount of these payments. In order for the Bank to finance the expenses related to the secondary reproduction, for each case the executor had to present the invoice of payment requested by the CMS, the confirmation that it had made the corresponding verification, and the information containing the number of piglets distributed as well as the location where the distribution took place. The Country Office made regular inspection visits to verify that data was being gathered. However, these visits could not of themselves determine the veracity of the information presented by the Executing Agency. In addition, the visits were not sufficient to determine the pool of final beneficiaries of this activity. There was no independent corroboration of the basis for payment. The external audit never noted that this activity was not contemplated in the loan contract nor that it had

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.

replaced one that was in the contract. No evidence related to the transactions between the farmers' associations or NGO's and the final beneficiaries of the breeders could be found.

The cost-recovery mechanisms for the vaccinations and for the slaughterhouses were never put in place. The corresponding contractual condition was therefore not met at any point during execution.

The transfer of resources from the construction of 8 reproduction centers to the slaughterhouses component allowed the financing of the latter activity to be almost 300% of its original budget. Even so, it was not possible to complete the construction of slaughterhouses nor to even complete the equipping of those that were built. An increase of this magnitude without any corresponding increase in the number of centers should have been the subject of specific analysis and justification.

The audited financial statements were often submitted to the Bank with some months of delay. Their findings, in general terms, showed a fair management of the Bank's and the Borrower's resources but frequently suggested better internal administrative controls. However they omitted information about contractual conditions with regard to the management of the resources that were to be generated by feed importation component; i) the special account that was supposed to be opened for this purpose (Clause 6.07 a)); and the status of the quarterly financial reports of the latter account (Clause 6.07 b)).

Since cancellation of the loan in August 2002 and despite sustained efforts by the Bank, the Borrower has not returned the outstanding balance on the revolving fund of US\$134,000.

Although often delayed, the local counterpart was eventually available throughout project execution. During execution the borrower fell into arrears with the Bank on several occasions. The most prolonged stretch began in May 2001 and extended until February 2002 when the Bank was obliged to declare all Haiti's loans to be in non-accrual status.

2. Procurement

There is no written evidence of any bidding process that was ever undertaken to choose any of the 13 private reproduction centers. Neither is there any hard information on how the Farmers' Associations and NGO's that bought the pigs at subsidized prices were selected. There is no written evidence of how the private operators of the new slaughterhouses were selected.

3. Compliance with Contractual Conditions

Despite the Bank's efforts, the executor has not complied with the following contractual conditions from the Loan Contract:

- a. The maintenance clause.
- b. The ex-post clause
- c. None of the clauses related to the feed importation component: Clauses 6.07 a) that makes reference of the need of presenting the operational norms of the subprogram of feed import and to open a special account to

manage all the revenues generated by this component; 6.07 b) The need of quarterly financial reports for the latter account; 6.07 e) the need of a study on how to utilize the resources generated by the feed sales; 6.07 h) the need of an agreement with an NGO or an agriculture association to regulate the acquisition of the feed, the way that it was to be sold, and to fix final sale price; and 7.03 that refers to the need to undertake independent audits for the subcomponent of feed importation

- d. 6.07 i) calls for agreements with the NGO's and farmers associations to guarantee the operation and maintenance of the centers to be constructed;
- e. The clause related to the cost-recovery system for vaccinations.
- f. The requirement that inter-institutional agreements be signed with other public agencies to enable the quarantine system to be put in place
- g. The stipulations regarding procurement.
- h. The eligible activities as described in Annex A of the Loan Contract
- i. The procedure for changing the amounts allocated to each component.

4. Reports

Quite apart from any shortcomings or omission of information the financial information systems established by the PDEP, even though not automated, were up-dated on a regular basis. However, the search for any specific information had to be done manually and often took more time than it would have taken if the systems had been automated. In some cases this situation produced delays in the decision making process. The financial information system provided the basic source of information needed for the financial reports that were audited each year. The reports were used to assist decision making during execution and were deficient to the extent that they did not provide complete information on the basis for payments to reproduction centers.

The technical reports did not give information on final beneficiaries. There was no effort to gather the data called for by the Loan Contract to prepare the ex-post report. There is no idea of what change, if any, occurred in the consumption of animal protein by the poor. There was no analysis of what would happen to the system once the Bank financing ran out. This lack of information on critical aspects was mirrored in the lack of planning for what would obtain at the end of the project.

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?

Both the initial Executive Unit and the subsequent coordination unit (PDEP) were entirely financed by the Bank's resources. Their staffing was done according to the Bank's procedures.

The staff and consultant's contributions to the project were an important factor in the project's development. With the exception of one or two contracts that had to finished before their completion due to changes in the scope of the work rather than to the poor production of the consultants, all the outsourcing produced the expected results.

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?

Yes, in general terms, especially when considering the slaughterhouse component where the relationship between the Ministry of Agriculture through the PDEP and the municipalities where these facilities were to be built, was crucial. This relationship also benefited the porcine distribution and helped identify the positions to be filled by the new professionals trained by the project. The impact of these relationships is evident: The slaughterhouses were built and are functioning; the piglets have been distributed nationwide and the technicians are working all over the country.

However, the Ministry of Agriculture has not been able to establish the needed links with other governmental agencies that would have helped install the quarantine system in the country. In this case, the impact is also unmistakable: the system was never installed.

The original loan contract called for inter-institutional agreements that were necessary to accomplish some of the project's goals. Most of these agreements were never signed until the first project reformulation in 1989, which also called for these agreements and gave the executor new deadlines for this purpose. When reviewing the information filed at the country office, it was noted the even after the first reformulation, the executor had problems in signing those agreements, and requested –and was granted– several extensions until most of them were accomplished. However, the main agreements needed to launch the quarantine system were never signed.

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

Not significantly. Nonetheless, thanks to the project, the Ministry of Agriculture is now better prepared than before to run a project similar to this one as well as to manage critical situations such as diseases outbreaks.

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

No. The project was radically changed without the corresponding modification of the Loan Contract, however, this aberration was not noted by the Executing Agency. The project was not sustainable once the Bank financing was no longer available. However, prior planning to anticipate this moment was deficient. It should be noted, though, that once the money ran out the Executing Agency was quite able in helping come up with a new system based on radically reduced subsidies. The fact that no hard data was kept in final beneficiaries nor on the change in consumption of animal protein by the poor was not noted by the Executing Agency and therefore was not acted on.

The borrower showed very little commitment to enforce a strong meat importation policy. Moreover it was not able to coordinate its executive arms so as to establish and enforce a quarantine system in the country. The Executing Agency failed to comply with several contractual conditions. The agency also failed to set up vital cost-recovery systems.

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?**

Yes, the loan contract is very specific about the information to be provided. The Executing Agency failed to provide it as specified.

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

The Executing Agency, using the resources of the parallel TC and this loan financed a team of technicians. The Bank financing also paid for the cost of inspection visits both by this team and by supervising consultants. External audits were also financed. These all worked together to monitor performance. None of these performance monitoring activities noted that the project had changed nor that procedures were not being respected and the indicators were not be reported on.

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

The Loan Contract includes the specific indicators should be used. They are as follows:

- a) Number of piglets distributed every year as well as the name of the final beneficiaries.
- b) The volume of feed used in each reproduction center, describing its composition with regard to its use.
- c) The yearly number of demonstration units; number of piglets, the technological system and adjustments used for technological transfer.
- d) The production coefficient of the production centers by taking 5 samples by district that included: the number of newborns per year, the number of piglets per birth, the number of milk piglets, the average weight of the milk piglets, the type and average quantity of feed used in every stage of growth, the percentage of other alimentary resources.
- e) The average age and weight of the pigs sent to the slaughterhouses.
- f) The average unitary costs for feed of a sow, a stallion, a piglet in the growth stage, a piglet in the milking phase, as wells as the costs of vaccines and medicines.
- g) Rehabilitation and equipping of the central animal health laboratory (Tamarinier)
- h) Construction of 8 urban and 4 rural slaughterhouses with support services for meat preparation
- i) Improvement of the office of the executing unit

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?

- j) Construction of an additional urban slaughterhouse and 5 rural ones if those in the first specific objective are satisfactory to the Bank
- k) Rehabilitation and construction of 8 rustic pig reproduction centers
- l) Purchase of feed for these 8 centers and for 10 pre-existing ones
- m) Setting up and running small demonstration production modules;

Despite this contractual requirement, the progress reports presented by the Executing Agency reported on significantly different benchmarks and these were reflected in the Project Performance Monitor Reports (PPMR):

- a) 10,000 piglets are distributed in 7 departments by December 1999;
- b) Additional 1,500 piglets are distributed in 3 deficient departments (South, Northeast and Artibonite Valley) by December 2000;
- c) 13 secondary multiplication centers (CMS) are implemented and / or improved by December 1999;
- d) Appropriate swine food is available by December 1999 (100%).
- e) The appearance of the Bacterial Anthrax disease in most affected regions is monitored and controlled by December 2001;
- f) Annual vaccination campaigns against the bacterial Anthrax disease are progressively increased from 200,000 to 1,000,000 doses by December 2001;
- g) The New Castle disease, affecting the rural chicken population, is nationwide controlled by December 2001;
- h) Annual vaccination campaigns against the New Castle disease are progressively increased to 4,000,000 doses by December 2001.
- i) The financial contribution of rural livestock owners on the vaccination costs is progressively increased during project implementation (December 2001);
- j) The awareness of small producers to use anti-parasitary means is considerably increased by December 2001;
- k) Awareness and promotion campaigns are periodically organized;
- l) The diagnostic capacity of central laboratory of Tamarinier (LVCT) and decentralized public services (DDA) are improved by December 2001;
- m) Annual animal health monitoring programs (execution chronograms, evaluation and supervision activities) are elaborated by December 2001.
- n) 20 slaughterhouses are constructed, completely equipped, managed by private operators and regularly inspected by local meat inspectors by December 2001;
- o) 20 meat sale points are constructed and regularly controlled by December 2001;
- p) 1,200 veterinary agents/auxiliaries are trained in basic animal health issues by December 2001;
- q) 40 meat inspectors are trained and attached to the rural slaughterhouses by December 2001;
- r) 20 private operators are selected, trained and assisted in management and hygienic-sanitary issues by December 2001.
- s) 10 mid-level technicians are trained on the bacteriology and parasitology analyze exercises by December 2001;
- t) 8 quarantine agents are trained and installed in four strategic controlling points by December 2001.

The differences between the required indicators and some of those actually provided reduce the usefulness of the latter in gauging progress in activities approved in the second reformulation. In effect, the indicators used by the Executing Agency reflect the fact that the project had undergone an informal

reformulation that brought replaced old activities with new ones. The fact that Bank financing stopped being available in 2001 due to mounting arrears means that the project once again evolved into a new configuration in order to survive. However, there are no agreed indicators for mapping the new activities and procedures established after 2001. Finally, the failure to comply with the ex-post clause also means there is no sound basis for assessing achievement of the objectives of the second formal reformulation.

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 project was monitored according to the Bank's general procedures that included: i) Field visits; ii) inspection visits, both technical and financial; iii) external audits; and iv) constant communication with the executor. There were also several administration missions, two of which were responsible for the formal reformulations.

The project went through several problematic stages that often were beyond the Bank's control (political instability, arrears, embargo).

After the first years of the project's execution, the Bank realized that the original objectives were too ambitious and had very little probability to be accomplished, and thus, proposed the first reformulation (1989), but without taking into account the fragility of the re-installed democracy in the country that was toppled two years after by a *coup d'état*. In 1995, after the embargo, the Bank proposed the second reformulation that was important for giving the project a new focus. However, the second reformulation still fell short of what was needed as is evidenced by the informal reformulation of 1995 and the post-execution changes brought about to provide sustainability.

- 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?**

Yes. The strategic position of the Bank with regard to the government and to other institutions involved in the project on several occasions helped the executor to solve problems that otherwise would have taken long periods of time to be unraveled. For instance, the Bank facilitated conversations at technical levels between the Ministry of Agriculture of Haiti and the Secretaría de Agricultura of the Dominican Republic that aimed at establishing similar sanitary controls at the border. However, not even the Bank's strategic position could be strong enough as to bring all the Haitian agencies to work together and to establish a quarantine system in the country, nor to help the government in clearing arrears.

The Bank served often as a bridge between the government and other donors (World Bank, European Community, etc.) that were also working in the sector,

and coordinated some activities specially with the European Community (changed after into the European Union) and the United States Agency for International Development –USAID that were also working in fields related to those of the project.

V 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.)**

The main lessons that can be extracted from the project's execution can be summarized in the following:

1. Some of the prior conditions for disbursement (Clauses 4.02 (a) declaration of Haiti being free of the African Porcine Pest; 4.02 (b) creation of the Executing Unit and 4.02 (c) enforcement of the regulations of the Procurement National Commission, for example) could have been set as prior conditions to present the project for the Board's approval. This would have shortened the time span between the project's ratification and its eligibility for disbursements.
2. The issue of unclear land title is key in Haiti. It should have been settled prior to start of the execution of the project's infrastructure construction related components. This would have avoided unnecessary delays.
3. An operation should not rely on the success –or failure- of a previous or parallel one, as this one had to rely on the credit component of the 699/SF-HA which was supposed to provide the financial means to allow the peasants to buy the hogs that were going to be produced by the program.
4. In 1989 when the project was supposed to be completed and only two disbursements had been made by that time it should have been realized that the institutional capacity of the government was not consistent with the project's objectives.
5. A mid-term evaluation should have been included in the project design, The bench should have explicitly retained the right to cancel a part of the loan or its totality should the results of the evaluation been not satisfactory.
6. Projects should not expand public infrastructure unless fiscal resources will also increase to maintain and operate them properly. Alternatively, the inclusion of private or semi private participation proved to be an effective option for project sustainability. In this particular case, the management and operation by private or semi-private entities of both slaughterhouses and secondary reproduction centers is one of the key factors that enabled these facilities to continue to be operated even after the Bank financing was no longer available.
7. It is very risky to expect inter-institutional coordination during political crisis. This is the case of the needed –but not fulfilled- coordination to establish the quarantine system.

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.

8. It is not prudent to expect national policies to be developed and implemented during periods of crisis.
9. It is not advisable for the Bank to finance transactions without due measurement of services rendered. This was the case of the payments and transfers to the private interests managing the reproduction and distribution of improved hogs. There was no rigorous measurement of the services provided to the end users.
10. The use of subsidies in a project design is very tricky because at last it is very difficult to establish who are the real beneficiaries, hence Bank financing of subsidies requires much more rigorous controls than those used.
11. Mechanisms for reaching final beneficiaries should be properly defined from the outset.
12. The shift from emergency replacement of hogs to creation of a sustainable market for enhanced hogs had profound equity implications that should have been explicitly evaluated.
13. Cost-recovery mechanisms should not be allowed to languish. The vaccination, pig feed and slaughterhouse initiatives all anticipated cost-recovery, however, in no case was it put in place. This robbed the sector of sustainability. Private interests meet the cost of operating the new infrastructure, however, nothing is paid toward replacement of equipment, materials (vaccinations) or rehabilitation of buildings.

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

- i) Mechanisms for reaching final beneficiaries should be properly defined before starting execution; ii) Fundamental reformulation of projects is often the most effective way to achieve objectives in a dynamic context, however, transparency demands that they be effected according to formal procedures for modifying contractual conditions. This will ensure not just transparency but also maximum use of the Bank's know-how. iii) Projects should not expand public infrastructure unless resources will also increase to maintain and operate them properly; iv) The Bank should be more rigorous in establishing the classification of projects. Often, global operations are treated as specific.

VI. ADDITIONAL COMMENTS

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

PART TWO

(TO BE PREPARED BY THE BORROWER)

PROJECT NAME	Swine Repopulation
IDB PROJECT NUMBER	HA-0061
IDB LOAN AND TC NUMBER(S):	738/SF-HA ATN/SF-2357-HA
BORROWER AGENCY(IES) RESPONSIBLE FOR THIS REPORT:	Ministry of Agriculture, Natural Resources, and Rural Development (MARNDR)

I. 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 objectives of the project "Swine Repopulation Program" are articulated in the following four components¹⁶:

- 1.- **Swine Production**, that had the objective of distributing 10.000 rustic stallions to peasants all over the country.
- 2.- **Animal Health**, that aimed at the consolidation of the health animal infrastructure services through the construction of quarantine centers, the procurement of vaccines to control the principal endemic diseases, and, specially the construction and rehabilitation of the facilities of diagnose and bromathology of the laboratory of Tamarinier .
- 3.- The **hygienic-sanitary** component that aimed at the improvement of meat production and commercialization through the establishment a network of 20 equipped slaughterhouses.
- 4.- The **training** component, with the goal of improving the operational capacities of local technicians and peasants that were working in the sector of porcine breeding and reproduction.

Almost all the objectives have been attained. In component 1, for instance, 14.000 stallions were distributed instead of the 9.000 that were included in the original objectives; almost all the construction or rehabilitations in component 2 were finished; 17 slaughterhouses have been constructed, from which only 5 are fully equipped and operational. Only component 4 will have to be completed since up to today the training of the GSB (animal health group) in Artibonite, Nord West and Thiotte has not been finished.

¹⁶ These components respond to the de facto shift rather than to the latest reformulation.

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

No.

II PROJECT DESIGN AND EXECUTION

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

Concerning the project's conception the most positive aspect is to have conceived an Coordinating Unit instead of an execution one. This situation allowed to reduce the expenses on the Unit and increase its efficiency.

Thanks to this situation, the project was able to manage all the activities with the participation of the private sector through several contracts (example: contract of piglets production by NGO's and some producers associations instead the construction of secondary centers; contracts for the construction of slaughterhouses and for the rehabilitation/construction of quarantine stations; contracts for the training of the GSB agents; among others.)

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

Even though successful at the end, the hygienic-sanitary component had to struggle with the relationships between the project and some municipalities where the slaughter houses were to be constructed. The most common problems faced include the following: i) delays in solving legal matters to transfer to the project the land sites where the slaughterhouses were supposed to be built; ii) lack of interest of some communal directions in finding the best managing scheme for the slaughter facilities; iii) problems with the relative position of sites for the slaughter facilities and the communal markets; iv) general delays in the construction periods; and v) lack of interest of some key sectors in the implementation of this component.

- 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?**

During its execution the project had to face the appearance on the Classic Porcine Pest (PPC) in 1996 called an urgent response to start up an emergency vaccination campaign. At the end, the pest was controlled (2,500,000 pigs were vaccinated)¹⁷.

The other problems where related to the country's political situation, the embargo, and the arrears. Non of these could be solved from the project's perspective and during those periods the project was practically paralyzed.

¹⁷ The executor refers to the number of doses delivered rather than to the number of pigs, since some individuals had to be vaccinated more the once.

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?

The project has allowed the strengthening of some structures of the Ministry of Agriculture, Natural Resources and Rural Development -MARNDR. Considering the rehabilitation of the Tamarinier laboratory, this facility has allowed the MARNDR to offer more services to pig producers and to establish an epidemic surveillance network.

The veterinary sanitary defense groups (GSB) has also enabled the ministry to supply the demand of veterinary services all over the country. The rehabilitation/construction of the quarantine center of Tabarre and of the quarantine posts of the Port-au-Prince airport and port has enabled the country to control the sanitary condition of freight and passengers that come to the country using those facilities.

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.

Most of the project's development objectives have already been fulfilled. However they could have been accomplished in a better way had the political situation of the country been stable; had the country honored the timely payments vis-à-vis the Bank, had the embargo never occurred, and had the project not been closed abruptly.

III 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?)

During the project execution, the Bank through its sector specialists was a good administrator. The Bank accepted all the necessary suggestions made by the Coordinating Unit when presented clearly and were justified.

The suggestion of using the services of the private sector instead of moving on to the construction of the secondary reproduction centers that allowed reduce the project's costs, achieve a higher level of production and increase the efficiency was given by the Bank's sector specialists (Mr. Van Fleet and Mrs. Joseph).

Nonetheless, some incomprehensible behavior of some of the Bank's sector specialists has to be mentioned:

- a) Frequently they tended to forget that the project was not a grant but a loan and tried to impose their decisions.
- b) The Bank has had the tendency to use the clauses of the contract to its benefit. For instance the threshold of US\$ 50,000 that was fixed in 1993 for the revolving fund justification was very difficult to get changed, even given the fact that on that time the exchange rate was by far lower than the actual.

The application of the procedures was done according to the vision of the responsible for the project at the Bank. Some of them were slaves of these procedures and had the tendency to increase the time for the decision taking.

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

The Bank was a constant advisor to the project and helped in many occasions solve complicated problems.

IV 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?

The fact that the Bank had the veto in the execution of activities judged necessary by the borrower is itself a great handicap for the project. Therefore it would be advisable that once the annual plans presented by the executor and approved by the Bank, they could be executed without having the need of requesting constantly non-objections for each single activity, given that the administrative principles linked to the use of the Bank's funds will be respected.

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)

BASIC PROJECT DATA – LOAN 738/SF-HA

PROJECT DATES (MONTH/YEAR)	ORIGINAL	ACTUAL
Date of inclusion in pipeline I	N/A	N/A
Date of Profile II or Loan Request	Jul-30-1983	Jul-30-1983
Date of Analysis Mission	Sep-29-1983	Sep-29-1983
Date of Loan Committee Approval	Dec-15-1983	Dec-15-1983
Date of Board Approval	Apr-10-1984	Apr-10-1984
Date of Contract Effectiveness	Jul-23-1984	Jul-23-1984
Date of Compliance with Prior Conditions		Jan-24-1985
Calendar of Investments		
- Starting date	Jan/1984	Aug/1985
- End date	Dec/1988	Aug/2002
Disbursement calendar		
- First disbursement	Jan-24-1985	Aug-05-1985
- Last disbursement	Jul-23-1989	Aug-02-2002
For Sector Loans		
- First tranche		
- Second tranche		
- Third tranche		
Date of Physical Initiation of Works		
Date of Loan Commitment		
Date(s) of Cancellation(s)		May-22-1989 Aug-02-2002

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	17,400	11,312
IDB Financing as % of Total Cost	75%	82.7%
Total Cost of Project	19,600	13,676
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

Category of Investment	ORIGINAL				ACTUAL*			
	IDB	Borrower	Others	Total	IDB	Borrower	Others	Total
1 Administrative Expenses	0.152	0.148		0.300	1.621	0.595		2.216
2 Materials	13.397	1.405		14.802	8.359	0.391		8.750
3 Operational Expenses	-	2.846		2.846	1.109	0.682		1.791
6 Provisions and non specified	3.279	1.225		4.504	0.014	-		0.014
8 Financial Costs	0.572	0.176		0.748	0.209	0.695		0.904
Total	17.400	5.800		23.200	11.312	2.363		13.675

JUNIO 10, 2002

* The latest financial statements registered a figure of US \$1.195 million for the local counterpart as from the latest reformulation in 1995. However when revising the complete set of financial statements from the start of the program, the total local counterpart provided by the Haitian Government is to the project is of US \$2.354 million. The local contribution as registered in the LMS system is of 1,687 million.

2. Schedule of Investments

Years		ORIGINAL				ACTUAL			
		IDB	Borrower	Others	Total	IDB	Borrower	Others	Total
1983*	1					-			-
1984	2	1.363	0.209		1.572	-			-
1985**	3	4.192	1.287		5.479	0.449	0.399		0.848
1986	4	3.394	1.641		5.035	0.005	0.490		0.495
1987	5	3.368	1.267		4.635	0.030	-		0.030
1988	6	5.083	1.396		6.479	0.105	-		0.105
1989	7					0.361	-		0.361
1990	8					0.463	0.095		0.558
1991	9					0.893	0.102		0.995
1992	10					0.024	0.091		0.115
1993	11					-	0.115		0.115
1994	12					-	0.172		0.172
1995	13					1.054	0.050		1.104
1996	14					0.501	0.050		0.551
1997	15					1.205	0.061		1.266
1998	16					1.704	0.104		1.808
1999	17					1.631	0.105		1.736
2000	18					1.113	0.256		1.369
2001	19					1.470	0.247		1.717
2002	20					0.304	0.026		0.330
Total		17.400	5.800	-	23.200	11.312	2.363		13.675

* 1983 was the year of approval

** 1985 was the year when the loan was declared eligible for disbursements

The embargo began in 1991 and ended in 1994. No disbursements were made between 1993 and 1995 as the country fell into arrears with the Bank

LOAN DATA¹⁸

LOAN DATA	VALUES/DATES
Original Loan amount	17.400
Amount disbursed	11.312
Amount canceled	6.087
First disbursement:	
- Original date (m/y)	Jan/1985
- Actual date (m/y)	Aug/1985
Last disbursement:	
- Original date (m/y)	Jul/1989
- Actual date (m/y)	Aug/2002

¹⁸ If more than one IDB Loan/TC operation was used to finance the project, submit this data for each operation.

TC DATA (ATN/SF-2357-HA)

TC DATA	VALUES/DATES
Original TC amount	0.910
Amount disbursed	0.542
Amount canceled	0.368
First disbursement:	
- Original date (m/y)	Apr/1984
- Actual date (m/y)	May/1984
Last disbursement:	
- Original date (m/y)	May/1989
- Actual date (m/y)	Sep/2001

PART FOUR
HAITI
NATIONAL PROGRAM OF HOG RESTOCKING, HEALTH SURVEILLANCE,
AND DEVELOPMENT OF THE HOG INDUSTRY
HA-0061 (738/SF-HA, ATN/SF-2357-HA)

PROJECT COMPLETION REPORT (PCR)
Management Review Committee
December 2, 2003

I. INVITEES TO CRG

Robert N. Kaplan (RE2/EN2), Renato Puch (RE2/RE2), Manuel Rodolfo Agosin (RE2/RE2), John J. Hastings (RE2/RE2), Sandra Bartels (RE2/RE2), Marcia Bonilla-Roth (RE2/RE2), María Eugenia Nepote-Cit (LEG/OPR2), Emilio Cueto (COF/CHA), Gerard Johnson (COF/CGU), Camille Gaskin-Reyes (ROS), Laura Ramirez-Ramos (ROS/PMP), Christian Gomez Fabling (RE2/SO2), Lionel Nicol (RE2/OD3), Jorge Sapoznikow (RE2/SC2), Marcelo Antinori (RE2/FI2), Ma. Asunción Aguila (RE1/EN1), Alvaro Llosa (RE3/EN3), Michèle Lemay (RE2/EN2), José Rente Nascimento (RE2/EN2), Nadine Schiavi (RE2/EN2), Paul Trapido (RE2/EN2), George Alexandrou (RE2/EN2), Carlos Pineda Manheim (RE2/EN2/GDM), Diego Arias (RE2/EN2), Barbara Szaszkiwicz (RE2/OD3), Javier Jimenez Mosquera (LEG/OPR2), Javier Cayo (LEG/OPR2), Maristella Aldana (LEG/OPR2), Astrid Wynter (COF/CHA), Anna McInnis (COF/CHA), Juan Carlos Paez Zamora (COF/CHA) y Sergio Miguel Taborga (COF/CGU).

II. PARTICIPANTS

Robert Kaplan (RE2/EN2), Gerard Johnson (COF/CGU), Juan Carlos Paez Zamora (COF/CHA), Diego Arias (RE2/EN2), Nadine Schiavi (RE2/EN2), Javier Jimenez Mosquera, (LEG/OPR), and Kleber Machado (RE2/RE2). Written comments were received from Jacques Roumani (ROS/PMP).

III. ISSUES RAISED

The Management Review Committee reviewed the above-referenced Project Completion Report. Discussion focused on the following issues: lessons learned; the reformulations of the Project and the extent to which the last “reformulation” was reflected in the Bank’s project performance monitoring reports; the performance of the executing agency, including financial management, procurement procedures and compliance with contractual conditions; sustainability of the project’s hog and meat production activities; and the reasons for government’s cancellation of the undisbursed loan balance in 2002.

IV. CONCLUSIONS AND RECOMMENDATIONS

The Committee reviewed the above-referenced **Project Completion Report**, and reached the following conclusions and recommendations:

JUNIO 10, 2002

1. The lessons learned section of the PCR is well prepared and offers important guidance to be applied in new projects.
2. The cancellation of loan resources in 2002 left important elements of the project incomplete and has undermined the project's impact and potential sustainability. This cancellation did not reflect a lack of commitment by the government, but was a reflection of the difficulties that the government was having with the international community and the Bank in 2001 and 2002, and the fact that the government had gone into arrears with the Bank.
3. The "informal" reformulation in 1996, and the Bank's flexibility in supervising implementation of the project since then, led to important achievements which otherwise probably would not have been accomplished.
4. The issues raised in the PCR with respect to deficiencies in financial management, procurement practices and compliance with contractual conditions are worrisome and warrant further reflection by the Bank as we increase engagement with Haiti and undertake an ambitious new program of financial and technical assistance in the country.
5. Based on the foregoing observations, the CRG approved the PCR and recommended its distribution.

[original signed]

Robert Kaplan, President CRG

[original signed]

Nadine Schiavi, Secretary

JUNIO 10, 2002