

PDAAA-995B

5210075 (2)

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

1. ACTION TO BE TAKEN ("X" appropriate box)

Original Change
 Add Delete

DOCUMENT CODE 3 569

2. COUNTRY/ENTITY
HAITI

3. DOCUMENT REVISION NUMBER
XXX

4. PROJECT NUMBER
521/0075

5. BUREAU
a. Symbol LA b. Code 3

6. ESTIMATED FY OF PROJECT COMPLETION
FY 80

7. PROJECT TITLE - SHORT (stay within brackets)
 NUTRITION IMPROVEMENT

8. ESTIMATED FY OF AUTHORIZATION/OBLIGATION
a. INITIAL 2 76 mo. yr. b. FINAL FY 80

9. ESTIMATED TOTAL COST (\$000 or equivalent, \$1 =)

| a. FUNDING SOURCE | FIRST YEAR FY | | | ALL YEARS | | |
|------------------------|---------------|-----------|-----------|-----------|----------|----------|
| | b. FX | c. L/C | d. Total | e. FX | f. L/C | g. Total |
| AID APPROPRIATED TOTAL | | | | | | |
| (Grant) | (38.0) | (262.0) | (300.0) | (155.0) | (1134) | (1289) |
| (Loan) | () | () | () | () | () | () |
| Other | | | | | | |
| U.S. | | | | | | |
| HOST GOVERNMENT | | 14.7 | 14.7 | | 430 | 430 |
| OTHER DONOR(S) | | | | | | |
| TOTALS | 38.0 | 276.7 | 314.7 | 155 | 1564 | 1719 |

10. ESTIMATED COSTS/AID APPROPRIATED FUNDS (\$000)

| a. Appropriation (Alpha Code) | b. Primary Purpose Code | c. Primary Tech. Code | FY 76 | | FY 77 | | FY 78 | | ALL YEARS | |
|-------------------------------|-------------------------|-----------------------|----------|---------|----------|---------|----------|---------|-----------|---------|
| | | | d. Grant | e. Loan | f. Grant | g. Loan | h. Grant | i. Loan | j. Grant | k. Loan |
| FN | | | 300 | | 340 | | 290 | | 1289 | |
| TOTALS | | | 300 | | 340 | | 290 | | 1289 | |

11. ESTIMATED EXPENDITURES
250 300 250

12. PROJECT PURPOSE(S) (stay within brackets) Check if different from PID/PRP

- To provide Haitian mothers with knowledge of the best choice of available food and food preparation required for good health.
- Protect infants and children against certain serious infectious diseases.
- To teach farm families to grow more nutritious food crops.
- To determine most cost-effective alternatives which reduce malnutrition of children.

13. WERE CHANGES MADE IN THE PID/PRP FACESHEET DATA, BLOCKS 12, 13, 14, or 15? IF YES, ATTACH CHANGED PID FACESHEET.
 Yes No

14. ORIGINATING OFFICE CLEARANCE

Signature: *William T. Craig*
Title: Acting AID Representative
Date Signed: 10/27/75

15. Date Received in AID/W, or For AID/W Documents, Date of Distribution

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C. Description of the Project

The project is designed to assist the Ministry of Health in incorporating nutrition activities into the Haitian health system. The activities proposed in the PP have proved to be effective in Haiti over years during which time the nutrition programs have been adjusted to the operational capability and local resources of Haiti. There are now seven model nutrition centers plus 13 others operating in widely separated parts of the country under the Bureau of Nutrition.

This project will enable the GOH to augment the nutrition center approach by enabling the extension of the model into new communities and supporting on-going centers. The length of time necessary to bring about the major benefits of each new center has proven to be variable but usually the number of cases of serious malnutrition in an area can be reduced by two-thirds in two to four years. At that time it has been found the nutrition emphasis of the center can be reduced to occasional visits by Bureau personnel. Since the more permanent urban and rural centers have health delivery, sanitation, and agricultural components (rural Only), the diminution of the nutrition activity does not mean the community is abandoned.

Over the ten year development period there have been as many as 72 centers, of which 40 have been used for demonstration/testing in order to arrive at the present understanding of what components nutrition centers must have. The other 32 have been more isolated and operated by various voluntary agencies whose programs have been variable.

While there is no stereotype that will work in all geographic situations and population groups, the Bureau has developed its capability to analyze the need for establishing an effective center, to train the personnel, to administer the center, and to assist with the ancillary programs that are critical to the continued progress of the village (such as, potable water, agricultural innovation, local leadership development, health care, immunizations and family planning).

Many voluntary agencies have come to the Bureau of Nutrition for assistance in setting up a nutrition center in the region in which they are operating with the result that the Bureau has trained the staff for all the remaining centers (some 20 in all) that are operating in 1975.

The present project will continue to coordinate the various groups, train the staff of all new centers established, enlarge the number of centers directly operated by the MOH, evaluate the center design for most cost effective combinations, assist GOH with integration of the centers into health, community development, family planning, agricultural development activities.

B. Recommendations

GRANT..... \$ 1,289,000

LOAN

TOTAL..... \$ 1,289,000

Based on the experience of ten years there is a reasonable expectation that wherever the centers are in operation for two to four years the elimination of approximately two-thirds of severe forms of malnutrition will be achieved and the reduction of 1-4 year mortality from 45 to 11 per 1,000 of population will occur. ✓

Furthermore it is expected that the evaluation studies, identifying the interrelations between other components of center activities, food production, water potability and availability, and the minimal health care needs and family planning will provide guidance to AID and other donors on the transferability of the project approach.

Coordination will be effected with the established responsible institutions, CONADEP, P.M, HACHO, OPS/OMS, (PRUDEM), FAO, UNICEF, PNUD, C.M.S, C.R.S, C.W.S, OXFAM, CRH, and other agencies and institutions with activities in the field of nutrition.

A reasonable expectation of achieving the project purpose is soundly based on the fact that the program design is proven by 10 years of successful operation and refinement and has attained the purpose as stated below in the geographical areas where it has previously operated. The conditions indicating achievement of the project purpose at the end of the project will be (1) elimination of severe forms of malnutrition such as marasmus and kwashiorkor and (2) reduction of 1-4 year mortality from 45 to 11 per 1,000 of population in the project area.

D. Summary Findings

The Health Sector Assessment has identified malnutrition as one of the most serious problems facing Haiti today. (See Chapter V of the Health Sector Analysis by Dr. Frank Beckles). This conclusion is supported by the many studies done over the years such as those by Sibrell and collaborators in 1957, Patricia and Derick Jelliffe - 1963, Beghin, Fougere and King - 1970 and the continuing studies of the Bureau of Nutrition, the Division of Family Hygiene, and the Haitian Research Council. An effective program - methodology has been developed in Haiti to combat the nutrition problem. This program is on-going, experienced technical and administrative staff are available, and expansion to a size commensurate with the magnitude of the problem could be effected immediately if budgetary resources were available. Consistent with GOH increasing interest in resolving rural problems and the need for local leadership to initiate and operate development projects, the design of the nutrition center development places minimum dependence on central government and maximum reliance on local initiative with temporary outside technical assistance.

E. Project Issues

The principal issues are:

1. The mothercraft (nutrition center) approach is an apparent success in Haiti, whereas in other countries the results have been indifferent. Will it stand the test of expansion?
2. Will coordination with MOH regionalization efforts adversely affect local leadership response to center development?
3. Could significant nutritional improvements be achieved through media education, documentaries and instructional pamphlets?
4. Can the GOH through coordination bring about integration between MCH/Family Planning, health care, nutritional work and agriculture extension?
5. The mothercraft approach is thought by some to be high in cost. How can this issue be quantified and resolved?
6. Would alternative approaches produce equal or superior results with equal commitment of resources.

All of the issues above except the last are addressed in the project design but the latter cannot be resolved until the project is implemented. Indeed, it is quite possible that in the course of the project life there will be evaluations showing the need for additional mechanisms to bring about effective integration of food production, distribution, storage, local processing food formulation and health and family planning delivery.

Reasonable alternative approaches are not readily apparent today when one considers the history of lack of attention to 85% of the population, the rural people. Today's alternatives would need to be designed around imported food sources, and other outside resources and technical assistance funds. The possibility of obtaining major nutrition improvement through increased local food production must await the proper stimuli from amelioration of agricultural policies, research, technical assistance, and production inputs.

In the meantime, the nutrition center concept is designed to include marginal agricultural improvements within the existing situation and resource base.

Part II. Project Background and Detailed Description

Any approach to the problem of nutrition in Haiti should include some basic data on demographic, economic, and cultural factors.

Demography

The Haitian people are facing one of the most serious population problems in the Western Hemisphere.

A population which consisted of 1,100,000 in 1863, increased to 3,379,800 in 1950 and will reach, according to reliable estimates, over 6,925,000 in 1980. The birth rate is about 37.3 per thousand, higher than the South American average (about 33.7 per thousand) but lower than the Central American-adjacent islands average, (about 42.6 per thousand).

Characteristic of the Haitian population is an elevated mortality rate, about 16.9 per thousand. Infant mortality, between 180 to 200 per 1,000 live births, and mortality in the 1-4 group, 45 per thousand, provide ample evidence of persistent malnutrition when compared with Bengoa's hypothesis fixing a 10 per thousand mortality in the 1-4 group as a limit beyond which malnutrition is to be anticipated.

Rate of growth of the population may be calculated from mortality, 16.9 and the birth rate, 37.3 giving an annual increase of somewhat over 2 percent; again, a relatively high rate.

Population density is 190 persons per square kilometer; density per square kilometer of cultivable land soars to 450. This latter figure is a source of major concern when one considers the low productivity of Haitian agriculture. In fact 84.9 per cent of the population lives in rural areas, where they are victims of low crop yields and very poor living conditions.

It is difficult to select a country with a clearer pattern of a high level births followed by high morbidity and high malnutrition ending in high death rates.

The output from this cycle is a population wherein a significant proportion of children are growing to the adults with permanent physical damage.

In this project there will be an attack on the malnutrition problem and this attack should reduce morbidity. In addition, there will be activities to reduce the birth rate.

Economic Factors

When speaking of the Haitian economy, one is constantly forced to return to agriculture. The agricultural sector, which engages 83.6 percent of the population 14 and over is engaged in a combination of cash crop/

subsistence agriculture including such food crops of maize, millet, manioc with lesser amounts of beans and rice. The farmers have tiny plots to farm. Even the commercial producing units are characterized by the lack of fertilizers, irrigation, shortage facilities. Ignorance and population pressure have contributed to wholesale deforestation even of shade trees for coffee, lowering the quality and productivity of the basic cash crops.

Three-fourths of the land being mountainous, and only marginally productive at best, soil erosion has created a demographic squeeze of real concern to the Haitian Government.

If the above factors aren't enough, the elements have played their share in reducing the food supply. Repeated hurricanes have wreaked havoc on crops and plantations, and the accompanying floods have contributed to erosion. Partition of land has left the farmer with insufficient land, of low quality, often mountainous, to be farmed with primitive techniques. The result, of course, is low income and poor nutrition standards.

It has been observed in the Health and Agricultural assessments, however, that the potential to improve exists even without increased access to agricultural inputs and markets. Basically such improvements must be implemented through increased efficiencies in the use of existing resources - water management, water potability, eating practices, and improved sanitary practices. A cultural characteristic is that after the land has been prepared, most of the seeding, some of the cultivating and harvesting and all of the marketing is done by the women in addition to their duties in raising the children and maintaining a household.

Cultural factors:

Mainly characterized by its African and French origins, Haitian culture presents a vivid contrast: a small well educated urban society and a vast (about 85% of total population) illiterate urban and rural sector. While the well educated continue to improve their standard of living and way of life, the poor continue to languish in a traditional way of life.

The intermediary group linking the upper and lower sectors of the population tends to develop skills inherited from both sides, producing handicrafts and art work but still remaining small in number.

In nutritional terms, the contrast of extremes is reflected in diets; the well-to-do consume items from all food groups, the poor subsist on a limited diet, primarily starches. Ignorance and resistance to certain foods, tragically the high protein sources, meat, milk and eggs, explain the exclusion of these items from the diets of the most vulnerable, the pre-school child.

Dietary traditions are difficult to change, perhaps related to living patterns, in particular the "lakou" system, which concentrates the extended family in one yard. The proximity of several generations of the same family tends to guarantee that traditions persist.

Nutrition:

The factors cited above --- rapid population growth, insufficient land, poor soil quality and primitive agricultural techniques --- immediately suggest malnutrition. Environmental factors and poor sanitation compound the seriousness of the nutritional problem by reducing the efficiency of food utilisation. Clinical surveys carried out by Haitian and foreign specialists document the extent and severity of malnutrition in all age groups of the Haitian population. If malnutrition does not kill adults, it may reduce the ability to work and expose the person to complications when they are afflicted by other diseases. There is evidence, at the very least, that many adults are under weight (Sebrell, 1958). The situation changes when one considers the pre-school population. The largest clinical survey of this group was performed by Jelliffe and Jelliffe. Visiting all geographical Department in Haiti, and examining the pre-schooler, they found 60% of these children under-nourished. Severe malnutrition, reported as kwashiorkor or nutritional oedema, was found in 7%, nutritional marasmus in about 3 per cent. Clinically, hospital pediatric wards report seeing large numbers of oedematous children, and report high mortality among the patients hospitalized with kwashiorkor, in some instances as high as 30%.

This project builds on the extensive nutrition studies and activities that have been carried out in Haiti and in other countries. The project uses an interdisciplinary approach that focuses on (a) providing practical nutrition education; (b) attacking the major infectious diseases and (c) increasing agricultural production. The amount of financing devoted to agricultural production in this project is relatively limited for several reasons: (a) the major AID agricultural efforts will be carried on as part of the other agricultural projects, e.g. project 069 (Agricultural Development Support) and project 078 (integrated agricultural development); (b) it appears that a high percentage of Haitian families have enough income to provide adequate nutrition for their children, even with present poor agricultural technology. Dr King concluded in 1968 that the problem is not in most cases a net protein deficiency in the family but is instead an unwise distribution of the protein among the members of the family.

The two basic educational component in the project are for (1) nutrition center personnel and (2) mothers. Each center has a sub-professional trained in health care or nursing plus home economics appropriate to the food activity pattern of the poor household of Haiti. These sub-professionals are trained in the Nutrition Bureau classrooms in Port-au-Prince, followed by practical training under a previous trainee as intern in an on-going center. The personnel are girls from rural households and then will thus be able to manage the rural center alone, living there, but with monthly visits from the bureau staff. Annually they are brought back into the classroom for refresher courses and a little advanced or broadening training such as in Family Planning. The second level of education is that performed by the center manager. Her task is one of teaching mothers how to provide better care for their children, not only by teaching the preparation of better mixtures of nutrient foods but also the

teaching of games, activities, songs. It may seem unimportant in a paper such as this but it is worth recording - kwashiorkor and marasmus children don't sing! They whimper and try to cry. Mothers know such simple things and learn by seeing such responses.

This project will finance nutritional education activities which have been able to rehabilitate on a permanent basis approximately two-thirds of the children with serious malnutrition and to educate the mothers on good nutrition. As described elsewhere, this project will include a number of elements which were not included in earlier programs and the success rate may be higher than two-thirds.

In particular, food supplements are to be of indigenous origin and produced locally in the home. There will also be education activities in the form of radio broadcasts, posters, etc.

One of the activities under the project will be to help the Ministry of Health incorporate nutrition activities into the core of the health delivery system and thus create a better distribution of its resources between urban (public and private) and rural (largely non-existent) services.

The project will enable the MOH to fund new nutrition centers based on the potential to integrate these into the regular functions of the MOH, adding to these the type of family planning approaches that are appropriate to areas where non-professional delivery services must be used for many years. Another important aspect is to incorporate the nutrition elements into the health clinics and dispensaries already operating. The agricultural activities are limited because of the difficulty of offering the necessary range of agricultural services within the framework of the project. There are, however, opportunities to introduce new varieties and new commodities known to be grown under similar conditions elsewhere. The important aspect of the agricultural activity is to realize that it is basically a home garden experimental type approach which in the absence of research trial may be a way of getting the more aggressive farmers to try new things. If real risks were involved, the farmers themselves would be reluctant to try.

Several of the centers operated by voluntary agencies use Title II foods to supplement the available foods in the market but in general the project avoids non-indigenous foods. These Title II foods, however, are usually prepared in the center along with the local corn meal, beans, manioc, etc.

The teaching of how to prepare foods is limited to locally produced materials, thus meeting the point that a nutritious diet can be maintained using a strictly Haitian product mixture.

The AID financed nutrition work will be closely coordinated with the other nutrition activities of the Government. The Government has established a "Programme de Nutrition et de Developpement Rural (PRONUDFRU)"

(Program of Nutrition and Rural Development) which is being supported by the UNDP, FAO, and UNICEF. This program stresses agricultural production, particularly through school gardens and 4H (in Haiti 4-C) Club Gardens, and education work through home economics programs and related activities.

A coordination Committee has been formed for this effort which consists of seven representatives of several Ministries. This Committee is to be advised by foreign experts. In the implementation of the GOH/AID nutrition project, we would plan to work very closely with the Coordination Committee.

Part III - Project Analysis

A. Technical Analysis

The technological approach chosen is educational in nature and directed toward a target population which is the key group in changing the eating habits of the nuclear family. This target population is composed of the mothers in the lowest income group of Haiti and whose children, consequently, are most at risk of being in the worst nutritional status. If the nutritional status of these children can be improved by a type of nutrition education directed at the mothers, a significant step would be taken in solving one of the country's most serious problems. Immediately two constraints become apparent. First, the mothers are almost all illiterate and, second, due to the extremely low income of the group, the families food budgets cannot be greatly increased over those already available.

The first constraint of illiteracy and difficulty in communication is overcome by using a simple demonstrational methodology in a setting closely resembling the actual home environment and utilizing a Creole-speaking worker who is from the community and who has been specially selected and trained in the program technique. The second constraint is overcome by a program design which is restricted to using food-stuffs readily available in the community which can be bought or produced at an expenditure which is no greater than the expenditure which is presently being made by the family. This latter conception is based on the fact that studies and experience have shown that a significant cause of malnutrition in the under five group is a result of maldistribution of foodstuffs within the family and ignorance of what foods are necessary for the good health of the child.

By selecting the worst-nourished children in the community and demonstrating to the mothers that these children can be brought to a state of good health within the limitations of their meager resources, the educational goal is achieved. The benefit of rehabilitating the malnourished child who physically participated in the program should be considered as only one benefit, which though important, is overshadowed by the fact that experience with the program has shown that even wider benefits accrue. These are as follows: Few of the future children become malnourished in families where a mother has participated in the program. There is a lower incidence of malnutrition of the daughters of the mothers who participated in the program as well as a lower incidence of malnutrition in the children of mothers who did not participate in the program but who live in a community where a program has been carried out. As an adjunct to the basic program, immunizations are given to protect children against the more serious childhood diseases and basic instructions in hygiene and environmental sanitation is included in the project design. The simpler techniques of family planning not requiring high-level professionals

such as condoms and foam are to be phased into the program in those locations where the maternal and child health family planning program is not integrated into a joint effort with other health service activities.

Agricultural education and simple technical assistance will be given to the fathers of the families participating in the program in so far as manpower constraints allow an effort to encourage the growing of more nutritious foods. However, as stated above, the major AID agricultural efforts will come from other projects.

Part III

B. Financial Analysis

a. Effect on Project Participants

Participation by mothers in the educational program at the nutrition centers requires their attendance one day per week for a period of three to four months. This level of attendance is normally achieved, except on the market days. Since women are responsible for marketing, there would be financial penalties to the family were she not to go to market. Financial gains to the family have been observed as a result of attending the center. The gains in rural areas have largely been associated with improved agricultural production, through better seeds, irrigation, animal husbandry (usually a few pigs).

In the suburban centers, gains have been observed because the mothers have learned that keeping themselves as well as their children clean results in a better appearance (less skin disease and cleaner clothing). The appearance when coupled with the new skills in food preparation has enabled them to get employment in the domestic service area. The records accumulated to date on the extent of the financial gain have not been quantified but will be during the project life by active follow-up programs. In the case of employment gains it is known that no previous employment by most mothers has existed other than to serve the home.

Other limited financial effects are associated with the food supplements supplied during the three-four month training period. In rural centers the women bring a portion of the food used and the center supplies the rest. In urban areas, food must be purchased and mothers must pay for part of the food used. In many cases the mothers perceive the financial benefit of the food received during training but also recognize that after they leave the center they will be able to prevent serious malnutrition even with existing family resources.

b. The Other Project Participants

The staff of the Nutrition Bureau and the centers will receive income for working in the project. MOH staff are typically paid for part-time work only. Voluntary Agency-operated centers pay for their center staff. Thus, since the project will expand the number of centers, and Haitian staff will be used, there will be direct income benefits as shown in the budget tables.

- c. The competence of the Bureau of Nutrition to achieve the purpose within the financial context is excellent, because the Bureau has had ten years of experience in periods of both expanding and diminishing financial resources.
- d. One of the principal outputs of the project is expected to be a sounder cost/effectiveness analysis of the Nutrition Rehabilitation Center concept. It has already been observed that rural centers can achieve their purpose in a few years and be phased out with little regression if there is at least minimal follow up.

In urban centers a different cost/effectiveness approach is needed since the population being served per center is greater and the extent of integration with health and family planning services seems to offer other economies.

e. Basis of Cost Estimates

The basis of cost estimates was drawn from Annex E which was prepared by Dr. William Fougere, the Director of the Bureau of Nutrition. The only significant changes made were to add factors for inflation and contingencies and slight adjustments in the timing of the flow of funds. Since Dr. Fougere has had years of experience in costing the program elements we believe the financial plan to be firm and sound.

SUMMARY COST ESTIMATE AND FINANCIAL PLAN
(US \$ 000)

PROJECT PAPER

| Source | AID** | | Host Country | | Other(s)+ | | Total |
|--------------------------|-------|------|--------------|-------|-----------|----|-------------|
| | FX | IC | FX | IC | FX | IC | |
| Use* | | | | | | | |
| 1. Technical | 35 | | | | | | 35 |
| 2. Commodities, material | 77 | 50 | | 16 | | | 143 |
| 3. Salaries | | 200 | | 63.6 | | | 263.6 |
| 4. Operational costs | | 584 | | 220.4 | | | 804.4 |
| Inflation factor | 33 | 220 | | 100 | | | 353 |
| Contingency | 10 | 80 | | 30 | | | 120 |
| Total | 155 | 1134 | | 430 | | | 1719 |

COSTING OF PROJECT OUTPUTS/INPUTS
(In \$000 or equivalent)
Project Paper

New
Rev # _____

Project # _____ Title _____

| Project Inputs | Project Outputs | | | | TOTAL |
|--|-----------------|-----|-----|-----|-------|
| | # 1 | # 2 | # 3 | # 4 | |
| AID Appropriated | | | | | |
| 1. Technical | | | 30 | 15 | 45 |
| 2. Commodities materials | 130 | 40 | | | 170 |
| Other U.S.* | | | | | |
| 3. Salaries | 210 | 70 | 15 | 5 | 300 |
| 4. Operational costs | 605 | 154 | 10 | 5 | 774 |
| Host Country | | | | | |
| 1. Commodities | 9 | 4 | 2 | 1 | 16 |
| 2. Salaries | 43 | 10 | 5 | 5 | 63 |
| 3. Operational costs | 127 | 95 | 1 | 1 | 224 |
| 4. Buildings, equip furnishings, vehicles | 93 | 30 | 2 | 2 | 127 |
| Total | 1217 | 403 | 65 | 34 | 1,719 |

- #1 Mothers educated in improved nutrition
- #2 Farm families knowledgeable in improved production
- #3 Improved nutrition center design
- #4 Recommendations on cost/effective alternative to reduce malnutrition of -

III C. Social Soundness Analysis

1. Socio-Cultural Feasibility

Feasibility of the project from the socio-cultural standpoint is primarily based on the minimal disruption which ensues as a result of participation and attainment of objectives. An important is the lack of necessity for a strong community social infrastructure or demands on local leadership time and resources. The demand on the time of the mothers would seem to be a constraint since she must be present at the nutrition center for four to five hours per day, one day of each week, for the extended period of four months. In practice this demand on time has not been an obstacle to participation but apparently is overcome by the incentive of a hope of being able to save the malnourished child.

While there are scattered clusters of homes in many parts of the country, there are many persons who live in houses situated on their farm - a pattern which is particularly common in hilly areas. As a result of this situation, an additional demand on time results from traveling to and from the nutrition center, usually on foot. In rural areas the distance from home to center can be significant but again in practice, experience shows that the mothers are willing to make the effort. An additional motivating factor may well be that the mother looks on the food which the child receives as a supplement to total income of the family. Since she is accustomed to walking long distance to buy and sell she may look on the program as a market bargain. Most of these unknowns will be resolved by evaluations which will be performed during the project life.

2. Spread Effects

As stated above, the target population is the mothers of those children most at risk of severe malnutrition in the under 5 age group. Statistical information shows that probably 10% of families fall into this category. In the initial period of 5 years about 30% of the target group of the entire country would participate in the project. At first glance this would seem to be a small segment of the population as calculations would show that there are about 1,000,000 families in the country with 100,000 of them at risk as defined above and only about 30,000 would actively participate in the program. The fact that the knowledge gained by mothers has a preventive effect on other children in the family becoming malnourished and that this knowledge is passed on to her daughters and other mothers in the community is counted on to greatly enhance and increase the impact of the project beyond that of the immediate target group.

As other development programs are implemented, especially those which increase agricultural production, the magnitude of improvement in nutritional status should reach a higher level. In other words, with present resources a certain level of improvement can be reached but certainly will have a limit imposed by total availability of food stuffs. As this limitation is removed through agricultural development there will be a synergistic interaction which allows progress to higher levels.

At this point the exact geographic coverage has not been mapped out in detail in the sense that a list of locations for the centers and the time sequence of their establishment has not been prepared. This geographic coverage will result from the on-going epidemiologic survey which indicates which localities are in need of such assistance. "Needs" will be modified by many environmental and development factors. Drought in one area, a flood in another, a successful agricultural improvement effort elsewhere can and will continue to modify the nutritional picture and affect project strategy and implementation.

3. Social Consequences and Benefit Incidence

As indicated previously, the program design is such that minimal social disruption is produced. It is not possible to find evidence of adverse effects on either the target populations or other groups in the society and all apparent effects are of a positive nature. Two indirect effects may be postulated but at this point are certainly not proven. First, there may be a tendency toward reduced migration to urban areas. Secondly, there may be a rising expectation and demand for social services from the government. At present, particularly in the rural areas, government presence and provision of services is minimal or non-existent. Experience in other countries shows that once the government begins to provide services there is always rising expectations and demand which tends to place pressure on the government to accelerate the process. Any improvement in living conditions in the rural areas should have a positive effect in slowing migration to urban areas. We have dealt with the question of demand on the time of the mother within the context of a constraint on participation but it must also be considered in the context of farm labor. The mother provides a significant input of labor into the family agricultural economic unit in such things as planting, weeding and harvesting. During the four months she is involved in the project, this labor may be in large part lost to the family with a resultant negative effect on farm production. This effect can be ameliorated by timing programs in accord with the crop cycle and selection of participants for programs occurring during busy seasons from mothers least involved in farm labor. However, it is doubtful that the negative effect can be completely alleviated and some sacrifice will be made for this relatively short period of time.

D. Economic Analysis

In this non-revenue producing project, the principal issues in carrying out a cost/effectiveness analysis is to identify all of the various costs associated with achieving the outputs and further to quantify all of the outputs so that a reasonably accurate estimate of effectiveness can be made.

Haitian experience with the operation of nutrition rehabilitation centers is believed to be more extensive than anywhere, yet a formal cost/effectiveness study is not in hand.

Indeed, it is our best judgement that the analytical requirements to carry out such an analysis exceed the capabilities of those who have been associated with the centers.

It is proposed, therefore, that early in the project, technical assistance be provided the Nutrition Bureau in carrying out cost/effectiveness studies on the several different types of mothercraft center now in operation and also to project the cost/effectiveness of the new centers being planned. During the life of this project this capability will be developed within the Bureau of Nutrition.

The analysis will not be a cost/effectiveness determination but will enable least cost estimates to be made at various effectiveness states. As such, the analysis can be a primary evaluation tool and will serve as a guide in setting up the project review schedules. Determining cost/effectiveness in a broader context, that is what other investments would produce equivalent effects, may not be appropriate, because agricultural investments, education investments, transportation and communication investments of the same magnitude would not produce equivalent reductions in malnutrition, improvements in morbidity, and improvement in human resource capability. Investments in other sectors generally have little effect on the within-family allocation of resources, a principal objective of this project. It is planned, however, that integrated family planning and nutrition delivery services will be evaluated for cost/effectiveness with and without the mothercraft component and before and after the mothercraft component. The principal difficulty in quantifying the cost/effectiveness in this case is, again, the diversity of effects brought about by the mothercraft activity - ranging through agriculture, irrigation, water potability, latrines and other sanitary practices, health delivery and simple family planning measures.

As the economic analyses begin to reveal the potential to increase effectiveness via increasing particular activities (i.e. in agriculture or water systems) the GOH may decide to approach AID and/or other donors to finance an expansion of such activities.

Part IV. Implementation Arrangements

A. Analysis of the recipients and AID's administrative arrangements.

1. Recipient

The project will be carried out by the Bureau of Nutrition in the Department of Public Health and Population. The Bureau of Nutrition will be the sole implementing organization other than for the AID role as described below. This organization has been carrying out projects similar to that presently being described for approximately 10 years. As a consequence it has had long experience in administration, planning, evaluation, training and supervision such as will be required. The director of the Bureau has previously worked with AID and other international organizations and understands the necessity for good management, reporting, accountability, evaluation and audit requirements. There has been marked stability of the administrative structure with minimal turn-over of staff through the years. This staff is adequate in size, training, and experience for the purpose of this project and consequently implementation can proceed as soon as approval and funding is available. It should be noted that the recently completed Health Sector Analysis described in some detail the activities of the Bureau of Nutrition and this project primarily results from the favorable findings of the analysis with respect to the capacity and results achieved by the Bureau.

The Bureau by mandate and experience sees its role as carrying out such activities as this project and is justly proud of its past accomplishments.

At present the personnel are understandably worried about their status and future as budgetary resources have dwindled in the last few years. As a consequence they view the possibility of AID support with great enthusiasm and the project is endorsed at all levels.

Physical facilities for administration and training are adequate and available.

2. AID

No unusual role and no major staff commitment is planned in the administration of the project.

B. Implementation Plan

The two principal activities in the project are:

1. To enlarge the population coverage of nutrition rehabilitation centers through the establishment of new operating units and to support on-going units.
2. The refinement of different designs for nutrition rehabilitation centers to serve different types of areas (isolated, rural, urban, etc.)

Both of these activities will be operating simultaneously since experience already in hand can be used to begin new centers in areas similar to those now in existence without waiting for further refinements and evaluations of effectiveness being carried out simultaneously.

The Bureau of Nutrition of the Ministry of Health is now staffed with experienced personnel and currently operating seven centers and supervising 13 others and has the capacity to establish and monitor up to twenty additional centers once the personnel to manage each center are trained. Each new center requires one person in daily attendance to take care of thirty children and five to six of the mothers.

The training period is about one month for a class of up to 20 girls. The teaching aids, texts, and field manuals are already developed and made available to each graduate. The preferred candidates are from the local area of the proposed center, selected by interview. One basic requirement is at least six grades of education. The girls are selected for personalities liked by mothers and children, home management skills, and teaching ability. Most are provided some para-nurse training to permit the delivery of simple health care. In conjunction with the selection of center managers, the selection of the site for the center is made. The general area has previously been selected based on: a) the potential to coordinate with other MOH programs; b) the nutritional need (survey); c) the agricultural potential; d) the water supply; d) the access of recipients to center.

Usually a building can be found suitable for examining the children, keeping growth charts and records and storing a small supply of corn meal and beans. It is only necessary to provide shade, perhaps to build a large table and a "tropical kitchen". Therefore it doesn't require much time to put a center into operation as shown in the tracking network chart attached. If the center is to be staffed with other personnel for health, agriculture, family planning delivery services, etc., there are other more extensive facility and equipment requirements.

During the first year (FY 76) it is expected that centers will be established at the rate of one every month.

As the site studies are completed, personnel selected, and training program organized, the new young women will spend time interning either before or after training (or both) in one of the existing centers.

Since each class in the center requires 3 months there is time to begin improvement in water supply, agricultural patterns, and home improvements, as well as to involve the fathers.

Simultaneously with planning and implementing new centers, an evaluation of the least cost combination of center activities will begin with the principal objective being to determine the most cost/effective combination of center inputs for each area, rural, urban, mountain, coastal, etc. From this study a center typology with associated costs and range of effectiveness may be possible which could serve as a guide in estimating the costs of a national program. The results will be used with the MOH to develop policies on the delivery of health services and nutrition and family planning.

The evaluation skills in Haiti will need to be supplemented by outside technical assistance of a person trained in systems analysis of health activities. It is estimated that approximately three more months would be required to complete the evaluation and to develop the typology.

Part IV (C) Evaluation arrangements for the Project.

Baseline data for the project have been collected as indicated in Parts II & III. Data relevant to the activities of a specific center are collected as part of the survey which precedes the selection of the site for a new center. Data are also collected routinely as part of the center's on-going activities and reported monthly to assist in project monitoring and implementation.

As indicated in the financial plan, evaluation with outside assistance will be carried out on an annual basis. In addition a special analysis and evaluation will be done during the first year to formulate any recommendations relating to center design which may seem indicated.

The administrative personnel of the Bureau of Nutrition are trained and experienced in evaluation of such projects and there will be joint participation in the evaluation process of members of the Bureau, USAID/Haiti and outside technical consultants.

D. Conditions, Covenants and Negotiating Statuts

There are no specific actions that need be taken by the host government prior to executing the Project Agreement. AID and the proper representatives of the GOH have discussed in detail the scope of the project and the obligations on the part of both parties and are in agreement on all substantive matters.

An outline of the financial procedures to be used in the PROAG follows:

1. Disbursements

AID will make up to \$ XXX available for the activities specified in Part X above. Costs for operational expenses provided for in this agreement will be handled on a direct reimbursement basis. For this purpose, accounts for both the recurrent operational costs will be opened at the Banque Nationale de la Republique d'Haiti. The specific amounts of the advances and the procedures to be used in the operation of these accounts will be the subject of separate letters of exchange between USAID and the Government of Haiti. The general procedures for the operation of these accounts are noted hereunder.

2. Documentation and Examination of Records

a. Advances of Funds by Means of Replenishment Vouchers

To obtain periodic advances of funds for deposit in the DFH accounts, vouchers will be submitted to Controller, USAID/Haiti, c/o American Embassy, Port-au-Prince. An original and three copies of a properly executed voucher on U.S. Government Form SF-1034 will be submitted for this purpose. DFH will submit this document at least once a month, and therein will specify the amount of the expenditures made during the period covered by the voucher. Each voucher must be supported by a schedule of expenditures according to the categories in Parts of this agreement.

b. Certification

Each voucher submitted by the DFH must be accompanied by the following certification signed by an authorized representative of the Division.

The undersigned hereby certifies (1) that payment of the sum claimed under the voucher is proper and due in accordance with the terms of this project agreement; (2) that upon request from AID, DFH will furnish such further supporting information to AID as the latter may require; and (3) that no other funds have been or will be requested from any source for payment of these expenses.

By _____ Title _____ Date _____

c. Final Voucher

DFH will submit the original and three copies of a properly executed voucher form SF-1034 marked "no pay" and "final voucher" to USAID/Haiti no later than 90 days after the final contribution date specified on the first page of project agreement, unless subsequent documents pertaining to this project contain provisions extending this final contribution data.

d. Examination of Records

AID, the Controller General of the United States or any of their duly authorized representatives shall have access to, and the right to examine, any pertinent books, documents, papers and records of DFH during the term of this agreement and until the expiration of three years after the terminal payment to be made relative to this project.

e. Authorized Agent

For the purposes and procedures noted herein, the Bureau of Nutrition, of the Ministry of Health and Population, is the designated agent of the Government of Haiti for the implementation aspects of this agreement.

The United Nations Conference 1971

EVALUATION OF THE EFFECTIVENESS OF EDUCATION AND REHABILITATION CENTERS

Warren L. Berggren, M.D., D.P.H.*
Port-au-Prince, Haiti

Education and rehabilitation centers are units organized to teach nutrition to mothers. The teaching is accomplished by actively involving the mother in recuperating her malnourished child. The idea of using the recuperation of malnourished children to teach nutrition to their mothers was proposed by Bengoa in 1964. Beghin, *et al*¹ organized, operated and evaluated the first Haitian education and rehabilitation center. A monograph giving the basic information on the organization and operation of these centers has recently appeared—"A Practical Guide To Combating Malnutrition in the Preschool Child", 1969. In Haiti the Haitian Bureau of Nutrition and several private and charitable groups obtained good results with these centers by adhering to certain common sense principles which assure that the mother can understand and duplicate the diet she is taught.

The Haitian education and rehabilitation center resembles any other house in the community it serves. Food served in the center is prepared over an open fire using the utensils commonly employed by families in the area. All food used excepting milk is purchased at a local market and the budget for food and fuel expenditures is kept within the means of the majority of the families of malnourished children.

The thirty most malnourished preschool children of the community are selected by weighing all the preschool children and examining them for signs of malnutrition. The mothers of these children are visited and the operation and purpose of the center is explained to them. The child is inscribed in the center if the mother is willing to bring him to the center each day for three or four months and if the mother agrees to help with the preparation of food one day per week.

During the ensuing three or four months the mother witnesses her malnourished child become nutritionally rehabilitated without medicines, in surroundings resembling her own home, on a diet the ingredients of which were purchased for a price she can afford and whose meals were prepared as she is accustomed to prepare them.

The importance of making every aspect of the center relevant to the mother's home situation, financial means and dietary customs cannot be

over-emphasized. Knowledge which the mother cannot utilize is a waste at best and frequently causes confusion.

The nutrition center does not attempt to teach an "ideal" diet. It must teach a diet which will be adequate to prevent severe malnutrition and which will make the best use of the mother's meager resources.

The nutrition center does not attempt to treat diseases other than malnutrition. As other diseases will surely be present in the children selected, the center works best when there is a hospital or clinic where these diseases can be diagnosed and treated if suspected among the children attending the center. A few Haitian centers operate adjacent to hospitals from which they receive children and their mothers after the child's acute medical problem has been treated.

The nutrition centers require evaluation to verify the adequacy and cost of the diet fed to the children, the effectiveness of the person in charge of the center, and the application by the mothers of the material being taught.

Evaluation of Adequacy and Cost of Diet

The diet taught in the Haitian nutrition centers is a daily combination of cereal and beans supplemented by milk and various vegetables, greens and fruits. The diet costs about nine cents (\$0.09) per person per day, a restriction that precludes the extensive use of animal protein. King, *et al* established the nutritive value of the cereal-bean combination by biochemical analysis to verify the amino acid formula, then by protein efficiency studies using rats and then by field testing for its acceptability and its ability to recuperate severely malnourished children. (King,³ Sirinit, *et al*,⁷ King, *et al*,⁵). Once this type of evaluation of the standard diet for a country has been carried out all that is needed is to confirm that the diet being demonstrated in a center consistently conforms closely to the standard diet. The center operator must record the menus each day so that this sort of evaluation is simplified.

The amounts and the value of each ingredient of the diet purchased for the center must be recorded each week by the person operating the center. Careful records of attendance of mothers and of children are mandatory. A regular evaluation of cost per person per day should be calculated to assure that the mothers' financial means are not exceeded.

*Director of Community Health, Hôpital Albert Schweitzer, Haiti, Assistant Professor of Applied Tropical Health, Harvard School of Public Health, Boston, Mass. (U.S.A.)
†Presented at the Western Hemisphere Nutrition Congress III Bid Harbour, Miami Beach, Florida, 1971.

The adequacy of the diet is further evaluated grossly but very practically by monitoring the children's progress. To do this the children are weighed at weekly intervals and the weights are recorded in tabular form in a notebook. Once a month these weights should be marked on the child's individual weight graph which compares his weights to a standard weight for children of the same age.

In Haiti the standard weight used for comparison of weight and growth rate is the 50th percentile of the group of Boston children studied by Stuart. (Nelson, *et al.*,⁶). The use of this standard is defended on the basis of the work of King, *et al.*,³ which showed that children of elite Haitian families weighed the same as American children of the same age.

During the child's three-month recuperation period his weight graph should show that he grows at a rate which is faster than that of the standard children. This growth change can be shown numerically by expressing the child's weight as a percentage of the standard weight for his age and sex. An increase in this percentage indicates that the child grew more rapidly than the standard whereas no change shows that the growth rate was equal to that of the standard population. All calculations of the percentage of standard weight are made by dividing the child's actual weight by the value given in the standard weight tables for a child of his sex and exact age in the 50th percentile of his cohort.

Among a group of 1,291 children who attended the nutrition centers operated by the Albert Schweitzer Hospital 84% gained weight more rapidly than the standard. The frequency distribution of the change in per cent of normal weight shows a mean of +4.4% a median of +4% and a standard deviation of 4.5%.

Children attending the center, selected as they are because they have the lowest weight for age of all the children in the community, can be expected to have a high rate of all diseases, not solely malnutrition. These other diseases can have more influence on the child's weight than does the adequacy of the diet his mother attempts to feed him. Thus, children will not always respond to the center diet by gaining weight faster than the standard. Those who do not gain faster than the standard often have diseases other than malnutrition which affect their appetite, or the absorption and the utilization of the food. A study of 246 children attending two nutrition centers confirmed this hypothesis.

Of the 246 children 30 (12%) failed to gain at a rate faster than standard. Nine (30%) of these children were found to have tuberculosis, a rate 6 times the age specific tuberculosis rate in the same community. A 20% stratified random sample of the 216 children gaining faster than the standard showed a rate of tuberculosis equal to the age specific rate in the same community. Three cases of pneumonia occurred in the slower group and none in the sample of the faster group. Serious debilitating disease other than malnutrition was found in 50% of the slower group and 17% of the sample of the faster group. These data suggest that the percentage of children

failing to gain faster than standard will vary according to the prevalence of diseases other than malnutrition among the children selected for recuperation and not solely according to the adequacy of the diet fed. Nevertheless the proportion of children in a center class gaining faster than standard and their median gain in percent of standard weight are two useful parameters for evaluating the adequacy of the diet.

Many children may be edematous when they first attend the center. This edema should disappear within a week or two. With loss of edema there will be loss of weight and the evaluation of the child's growth rate should be calculated on the basis of the weight gain after loss of edema. Failure to lose edema after two weeks in the center is an alarming event and the cause must be searched for immediately. Infectious disease or failure by the center operator to feed the child in spite of the child's apathy are more likely explanations than inadequacy of the diet.

The psychologic improvement of the recuperating child is difficult for the observer to quantitate but it is the most impressive of the changes remarked by mothers. The change usually occurs in the first week in the center and it is best determined by questioning the mothers. In general, the apathetic child becomes communicative, responsive, smiles, and begins to play with other children if his diet is adequate.

Evaluation of the Effectiveness of the Person in Charge of the Center

The prerequisites for becoming a center operator vary but must include maturity and the ability to learn and to teach simple lessons in nutrition.

The center operator must also be able to keep accurate records and a good deal can be learned from these about her effectiveness. The daily menus, the daily log, the weekly account of expenditures, the daily attendance of children and mothers, are kept in separate notebooks and can be quickly checked by the supervisor on visits to the center.

There is a real danger in evaluating the operator's effectiveness on the basis of her records and reports. She may quickly learn to concentrate on making good reports and neglect good teaching of mothers. In the supervision of the operator's work careful attention must be paid to what the mothers are learning. The supervisor should demonstrate that she is most deeply concerned with successful teaching.

Evaluation of the Effectiveness with Which Mothers Apply the Teaching

Direct questioning of mothers will not distinguish between those who have been appropriately motivated and those who have simply learned the expected answers to the questions. If direct questions are asked in the course of evaluation they should tap the mothers' attitudes rather than her information. All mothers will be able to repeat the names of the ingredients of a proper diet. It is more important to determine if the mother believes she can prepare the proper diet each day for her child and if she has given

thought to how she will adapt what she has learned to her own home and circumstances.

The Haitian Bureau of Nutrition evaluated the mother's application of her new knowledge directly by nutritional surveys of the community before, during, and following the activities of a nutrition center. (Report of Activities of the Bureau of Nutrition for the year 1970). These repeated surveys on the same community showed increased usage of the foods demonstrated at the center and a general increase in the calorie intake.

Attempts to evaluate the effectiveness of centers by repeated assessment of the nutritional status of the children of the entire community are fraught with many difficulties. The technique requires a careful census and great care to assure that every child in the community is seen at each succeeding examination. The mobility of most populations with severe nutritional problems can invalidate the most careful village census within a few months. Changes observed under such conditions may fail to bear any relationship to real changes in children whose mothers have been educated. Seasonal differences can have a profound effect upon the results. Economic and crop conditions may fluctuate from year to year and from locality to locality in the same region. Instability of marriage unions may result in many children being passed from household to household with catastrophic effects upon their nutritional status. It is therefore difficult to demonstrate the community impact of a nutrition center *per se*.

In spite of the recognized problems the Albert Schweitzer Hospital monitored the frequency of edema and the changes in weight and length of all the 1,800 children aged 0-to-6 years living within a 10 square mile census tract. Observations were made at monthly intervals during the first two years and then continued at three month intervals. Weighing and measuring and examination for edema was done by teams of auxiliary health workers. The results of this work are still being analyzed and will be reported separately. However, a preliminary analysis of two different localities within this census shows fluctuation of growth rate. This fluctuation of growth rate is demonstrated by plotting the monthly mean per cent of standard weight for each age cohort on a graph.

This parameter of growth rate fluctuated markedly in one of the villages, apparently in response to a particularly poor harvest. The second village, having a different crop pattern, did not demonstrate such a marked change.

The children attending the centers in the two study villages were not included in calculating the monthly mean per cent of standard weight for their cohort. Their growth rates were changed by their attendance in a center. Averaging their weights could have introduced artifacts which would distort the effects of other changes occurring in the community. The children attending the center showed a more marked weight response to the poor harvest than did their cohorts who did not attend the center. The harvest failure occurred during the time the center

was closed. The center children, by definition being those children in the poorest nutritional status in the community, were evidently the most susceptible to changes in availability of food. Their situation improved concurrent to the reopening of the center, apparently in response to the increased food intake. The observation period of these two villages seemed too short to permit evaluation of the effectiveness with which the mothers applied the teaching of the center, at least by these criteria. During the observation period, however, the prevalence of nutritional edema fell to zero as did the death rate due to malnutrition.

A two and a half year follow-up on one group of 36 children attending a center traced all 36 children. One child had died during the interval, presumably of recurrent malnutrition. One child was found to have severe malnutrition with edema. Two-thirds of the children had grown at rates as fast as or faster than the standard.

More interesting were the examinations of the younger siblings of the center children. Among the younger siblings of the center children 31, at the time of follow-up, were the same age or older than the siblings who attended the center. Such children were considered as being "comparable" to the center sibling. Seventy-three (73%) per cent of these comparable younger siblings had a higher per cent of standard weight than their older brother or sister had at the time the older brother or sister had been admitted to the center. This is an excellent result in view of the poverty of the community. A preliminary survey of homes of malnourished children prior to opening the center estimated that only 75% of the families could afford the 9¢ per person per day required to purchase the ingredients of the diet taught in the nutrition center. Apparently nearly all families able to practice what was taught did so.

Failure of the children to grow as expected could be correlated either with chronic disease such as tuberculosis or with separation of the child from one or both of his parents.

The correlation of a child's failure to grow with separation of the child from one or both parents prompted a study of family structure in a small locality which appeared to respond poorly to the nutrition center program it shared with two other localities. There were 46 children between the ages of 2 and 6 years. Only 24 of these were living with both their biologic parents. Of the 22 children not living with both parents 15 (70%) were in second or third degree malnutrition by Gomez standards whereas only 6 (25%) of the 24 children living with both parents were in second or third degree malnutrition. The difference is highly significant ($p < .001$). The important influence of family stability is further emphasized by the domestic situation of the 25 children who had either normal weight for age or only first degree malnutrition by Gomez standards. All except seven were living with both parents. Six of these seven were living with one of their parents within a complex of houses inhabited by close family

relatives who participated to some degree in the material and social support of the child. This support was apparently sufficient to overcome the disadvantage noted above for children not living with both parents. The seventh child in this sub-group had lost its mother very recently and had not yet shown the effects of parental deprivation.

In areas with an adequate census and a continual system of monitoring deaths and their cause, the changes brought about in death rates are excellent gauges of the improvement of health in the community. As economic changes, immunization status, crop failures, and epidemics may affect the death rates profoundly, it is impossible to distinguish the center effect from other effects without adequate controls.

The changes documented by the Albert Schweitzer Hospital for a defined population of 9,000 observed for three years are preliminary and affected by many factors other than nutrition centers but are still worth noting. In 1968 the death rate among children of 1-4 years of age was 12.2/1,000 children. This declined to 9.9 in 1969 and 9.2 in 1970. The death rate due specifically to malnutrition among children 0-4 years old was 8.2/1,000 children in 1968, 5.4/1,000 in 1969, and 1.4/1,000 in 1970. The last figure is even more impressive than it seems. The only deaths due to malnutrition in 1970 were among children who

had moved out of the census tract and much later returned in a moribund condition on the eve of their deaths in the hospital.

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Project Design Summary

Logical Framework

A-1 Statement of the Goal

To improve the health of the Haitian family in the lowest income groups.

A-2 Measures of goal achievement

Reduction in morbidity and mortality of the under 5 ages group from causes of malnutrition and infectious disease.

A-3 Means of verification

1. Hospital and Clinic Records
2. Nutrition Surveys

A-4 Assumptions for achieving goal targets

Agricultural production and/or income in low income group will at least keep pace with population growth and inflation.

B-1 Project Purpose

1. To provide Haitian mothers with knowledge of the best choice of available foods and food preparation required for good health.
2. Protect mothers and children against certain serious infectious diseases.
3. To teach farm families to grow more nutritious foods crops.
4. To determine most cost/effective alternative which reduce malnutrition of the poor.

B-2 End of Project Status

1. Malnutrition and infectious disease will be reduced in the below 5 age group.
2. Families will be producing and consuming more nutritious foodstuffs.

B-3 Means of verification

1. Hospital and clinic records
2. Nutrition surveys
3. Follow-up studies

B-4 Assumptions for achieving purpose

1. Methods are available for alleviating the nutrition problem in the under 5 age group.
2. Farm families can be taught and motivated to produce foods conducive to good health.

C-1 Project Outputs

1. Mothers provided with and using knowledge to improve nutrition of their children.
2. Farm families provided with and using knowledge of how to produce and utilize more nutritious foods.
3. Evaluation of most effective least cost design for different ecologic situations.
4. Recommendation on cost/effective alternatives and integrate activities to reduce malnutrition prevalence of the poor majority.

C-2 Magnitude of Outputs

1. 30,000 mothers & fathers have participated in program by the end of the 5 year period.

C-3 Verification of outputs

1. Nutrition center reports and records
2. Outside follow-up studies

C-4 Assumptions for achieving outputs

1. Nutrition centers will be established and supported
2. Staff will be trained and supervised
3. Funds will be available

D-1 Project Inputs

U.S.

1. Technical advice
2. Commodities, vaccines, contraceptives, training materials, furnishings, etc.
3. Budget support for salaries training, operational costs.

GOH

1. Supervision and training
2. Operational costs
3. Equipment and supplies

D-2 Implementation Targets

U.S.

1. Technical Assistance - USAID/Haiti staff - 2
Consultants - 345,000
2. Commodities - \$170,000
3. Budget support - salaries operational costs - \$1,074,000

GOH

1. Supervision and training - \$63,000
2. Operational costs - 3224,000
3. Buildings, equipment, furnishings, vehicles, commodities - \$143,000

D-3 Means of Verification

N.A.

D-4 Assumptions for providing inputs

Explicit in program responsibilities

CFI Narrative

1. 2/76 ProAg signed
2. 3/76 Training of Monitrices begin
3. 3/76 Site selection for establishment of centers begins
4. 6/76 First class of monitrices completed
5. 6/76 First of new centers opened
6. 3/77 First 10 new centers opened
7. Centers open and close as goals met in **specific** geographical area
8. 11/80 End of project report
9. 12/80 Final evaluation and recommendations done jointly as part of CFI #8

| COUNTRY HAITI | PROJECT NO. 521-0075 | PROJECT TITLE Nutrition Improvement | DATE 10/15/75 | ORIGINAL REVISION | APP DATE |
|---------------------------------------|---|--|-------------------------------|----------------------|--------------------------------------|
| CY Month | 76- J F M A M J J A S O N D | 77 J F M A M J J A S O N D | 78 J F M A M J J A S O N D | | |
| | <p>4. 1st class ends</p> <p>2. Training begins</p> <p>1. Progm signed</p> <p>3. Site surveys begin</p> <p>5. New centers open</p> | | 6. 10 new centers open | | 7. Centers open & close as goals met |
| FINANCIAL PLAN (\$000) | X 300 | X 340 | X 290 | | X 200 |
| Project Analyses & Recommendations | X X X | | X | | |
| EVALUATION | | | X | | X |

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|----|-------------------------|-------------------------|---|
| 78 | 79 | 80 | |
| | J F M A M J J A S O N D | J F M A M J J A S O N D | |
| | | | 3. End of project Report |
| | | | 9. Final evaluation Recommendations |
| | | X 159 | |
| | X | X | X |



REPUBLIQUE D'HAÏTI

SECRETARERIE D'ETAT DE LA SANTE PUBLIQUE
ET DE LA POPULATION

No. *1079*.....

PORT-AU-PRINCE, LE.....13 OCT. 1975.....19.....

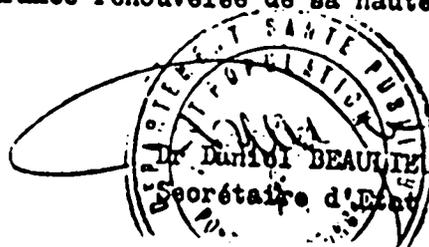
Mr. Scott BEHOTEGUY
Représentant en Haïti de L'AID
Ambassade Américaine
En Son Office

Monsieur le Représentant,

Comme vous le savez, divers projets intéressant des domaines variés de santé publique ont été élaborés par les sections compétentes du Département de la Santé Publique et de la Population, dans la perspective de leur intégration dans le cadre du système actuellement préconisée de régionalisation des services médico-sanitaires en Haïti.

A cet égard, la Secrétairerie d'Etat de la Santé Publique et de la Population a l'avantage de soumettre à l'AID, le projet annexé à la présente et qui a été préparé avec la collaboration du Bureau de Nutrition sous le titre "PROJET INTEGRE DE NUTRITION".

La Secrétairerie d'Etat de la Santé Publique et de la Population demeure persuadée que ce projet sera favorablement accueilli par l'AID en vue des suites utiles et saisit cette occasion pour vous exprimer, Monsieur le Représentant, l'assurance renouvelée de sa haute considération.



ADDENDUM TO THE PROGRAM PRESENTED BY THE PUBLIC HEALTH
DEPARTMENT TO REINFORCE THE ACTUAL STRUCTURES OF THE
NUTRITION BUREAU

1. ACTUAL PROGRAM

1.2 ORGANIZATION AND STRUCTURE

The Nutrition Bureau of the Public Health Department functions in the framework of the Public Hygiene Division. However, it has a certain administrative and technical autonomy which permits it to have other agricultural and community activities.

In order to face the various factors involved in the malnutrition etiology, the Nutrition Bureau groups its activities in the following sectors:

Educative: Training of Personnel in the Nutrition centers.

Training of students in the nursing school.
the

Training of mothers in the area of/nutrition centers.

Production of educational material: pamphlets, posters, etc.

Demonstration in the nutrition centers.

Clinical: To detect and diagnose malnutrition cases by clinical and nutritional surveys.

Therapeutic: Dietetic treatment of malnutrition cases utilizing local and imported products. In the latter case it is necessary to establish comparisons of these products with those locally produced as regards to their nutritional value. Utilization of serum by oral mean in the case of diarrhea and local protein mixture.

Preventive: Immunization (DPT-BCG-Ditetab-Polio-Tetanos, etc.) prevention of dehydration by oral serum.

Agricultural: Distribution of seeds, fertilizers, insecticides, introduction of corn rich in lysine (hard endosperm) sweet potato rich in carotene.

Sanitary: Construction of latrines, improvement of potable water by boiling or using halazone.

Motivation: Preparation at the family planning and utilization of the simple contraceptive methods at the scale of rural nutrition centers.

1.2 BUDGET:\$91,000

1.3 PERSONNEL: Director (1) M.D.

Administrator (1)

Assistant-Doctors (2)

Hygienist Nurse (1)

Astronomists (2)

Social Instructor (1)

Secretary-Dactylograph (1)

Archivist (1) Statistician

Drivers (2)

Centers Monitors 7 for the Bureau

21 for other private organizations operating centers under the supervision of the Nutrition Bureau.

Centers Assistants 28

1.4 ACTIVITIES: They are furnished in the statistical section for the year 1974.

The same ones exist with a reduction of the No. of centers as a result of ~~the~~ the compression of the Research Corporation.

1.5 ADMINISTRATION: This is assured by an Administrator who controls carefully justificatory all the expenses. The ~~justifications~~ documents are furnished and a regular report submitted to donors.

1.6 TRAINING: The courses are done in French and Creole and aimed to cover all epidemiological aspects of malnutrition. They are given at the Bureau by a multidisciplinary team(list already submitted above).

1.7 CENTERS: Operation: Operate everyday Monday through Saturday from 8:00 a.m. till 3:00p.m. except when they are integrated in the Health Centers. In this latter case, they follow the schedules of these latter, 8:00 a.m. to 2:30 p.m. The centers educate the mothers, cure malnutrition at all levels: including Kwashiorkor. Immunize children before their exeat and also the village ones when a new group is being recruited. Give advices of alimentary hygiene, make agricultural extension on small scale to encourage the culture of species rich in nutriments (corn rich in lysine, sweet potato, etc.) Make medical supervision.

1.8 NUMBER: For the country they reach the number of 23 but they are not financed only by the Bureau. This latter finances only 5 with the funds of Research Corporation and the Missionary Group "Missions Health Foundation".

1.9 LOCALISATION: Portail Leonane, Carrefour, Collin, Croix des Peres, Carrefour Vert, Brooklyn, Montrouis, Fond Michel, Trianon, Mirebalais, Bel-Air (Sans Fil), Orangers (Jacmel), Cite Jn Claude, Violet (Petit Goave), Centre de l'Arbre, Bassin Bleu, Boucan Patriot, Bombardopolis, Bourg Champagne, Terre Neuve, Jean Rabel, Ennery, Mole St Nicolas.

1.10 AGRICULTURE: Framework of fathers of children admitted in the nutrition centers and orientation of alimentary production toward the satisfaction of nutritional needs.

1.11 LOGISTIC: Transport: The Bureau is deprived with regards to transport. It utilizes as mean of equipment transport a Jeep Wagoneer, model 1966 and a Scout model 1961. It also exists for the supervision and the courses of Port-au-Prince a Nissan, model 1970 in good shape(good running conditions). Due to the state of wear of the Bureau cars, the team is often han-

Warehouse: In the Bureau building there is a small warehouse for the food received. The Bureau has two refrigerators for the vaccines and other articles which need to be refrigerated.

1.12 Promotion: Recuperated children usually continue to progress at their home. A follow up system of children which have received their exeat allows the continuation of the supervision even though they are at home. During their control visit, they receive a dose of vaccine and also food. The attached list permits to see the number of children taken care of after they have received their exeat for the preceding year.

1.13 Evaluation: This is done periodically at the occasion of visits. Reference is made to the children weight and their nutritional state. At the mother's level, this is done by interrogating those who are receiving an education at the center. Finally, at the village level, this is done by a dietetic and clinical surveys. The center should, in principle, provoke an improvement of the sanitary and nutritional state of the village which it covers ~~(2)~~.

1.14 Other Donors: Mennonites, Missions Health, Plan Parainage, Church World Service, CARE Foundation, Grace Children.

New Program: The activities cited above will be pursued in 20 new nutritional centers to be established in 20 localities where the clinical and dietetic clinics will justify their presence. (See program presented by the Public Health Department to reinforce the actual structures of the Nutritional Bureau).

BUDGET
1ère ANNEE

| | AID | COH/Apport local |
|--|--------------|------------------|
| I.- PERSONNEL | | |
| Directeur..... | \$ 6.000,00 | 2.160,00 |
| Administrateur..... | \$ 5.400,00 | 2.160,00 |
| Assistant-Directeur..... | \$ 5.100,00 | 1.440,00 |
| Médecins (2)..... | \$ 9.100,00 | 2.880,00 |
| Agronome (1)..... | \$ 4.200,00 | 1.440,00 |
| Infirmière (1)..... | \$ 3.600,00 | - |
| Secrétaire-bilingue..(1)..... | \$ 1.800,00 | - |
| Archiviste-Statisticienne (1)..... | \$ 1.440,00 | - |
| Dactylographe (1)..... | \$ 960,00 | 480,00 |
| Chauffeurs (2)..... | \$ 1.920,00 | 1.440,00 |
| Messageur (1)..... | \$ 480,00 | 720,00 |
| | <hr/> | <hr/> |
| Sous-total | \$ 39.900,00 | 12.720,00 |
| II.-ACTIVITES ET FACILITES | | |
| Véhicule tout terrain (2)..... | \$ 15.000,00 | - |
| Gazoline, lubrifiant et entretien..... | \$ 3.000,00 | 800,00 |
| Enquêtes cliniques et diététiques..... | \$ 40.500,00 | - |
| Entraînement du personnel..... | \$ 1.500,00 | - |
| Etablissement et fonction- nement de 30 centres de Nutrition..... | \$114.600,00 | - |
| Activités agricoles..... | \$ 50.960,00 | - |
| Supervision, Evaluation, follow-up..... | \$ 15.880,00 | - |
| | <hr/> | <hr/> |
| Sous-Total | 241.440,00 | |
| MATERIEL & EQUIPEMENT | | |
| Matériel pour entrai- nement planning familial médicaments, vaccins, four- nitures de Bureau etc..... | \$ 18.660,00 | 1.200,00 |
| | <hr/> | <hr/> |
| TOTAL (I + II + III)..... | \$300.000,00 | 14.721,00 |

BUDGET 1ère ANNEE
DETAILS

1.- PERSONNEL

1-1 ADMINISTRATION

| | | |
|------------------------------------|----|------------------|
| DIRECTEUR..... | \$ | 6,000.00 |
| Administrateur..... | \$ | 5,400.00 |
| Assistant-Directeur..... | \$ | 5,100.00 |
| Secrétaire bilingue (1)..... | \$ | 1,800.00 |
| Archiviste statisticienne (1)..... | \$ | 1,440.00 |
| Dactylographe (1)..... | \$ | 960.00 |
| Chauffeurs (2)..... | \$ | 1,920.00 |
| Messager (1)..... | \$ | 480.00 |
| Sous-Total | \$ | <u>23,100.00</u> |

1-2 EQUIPE MOBILE

| | | |
|---------------------|----|------------------|
| Médecin (1)..... | \$ | 4,800.00 |
| Médecin (1)..... | \$ | 4,200.00 |
| Agronome (1)..... | \$ | 4,200.00 |
| Infirmière (1)..... | \$ | 3,600.00 |
| Sous-Total | \$ | <u>16,800.00</u> |

U.- ACTIVITES & FACILITES

2-1 Transport

| | | |
|-------------------|----|-----------|
| Wagoneer (2)..... | \$ | 15,000.00 |
| Entretien..... | \$ | 3,000.00 |

2-2 Enquêtes diététiques:

15 jours, 6 enquêteuses
visitant 30 familles
Salaire 6 enquêteuses
\$5.00 X 15 X 6 = \$450.00

Matériel pour enquête \$500.00
\$950.00

2-3 Enquête clinique

Frais..... \$250.00
Dépouillement..... \$150.00
\$400.00

Sous-Total enquête (\$ 950.00 + 400.00)
pour un centre.....\$ 1,350.00
Sous-Total pour 30 centres.....\$ 40,500.00

2-4 Entraînement de
 30 monitrices
 pendant 1 mois 1/2 à \$50.00.....\$ 1.500.00

2-5 Etablissement de 30 centres de Nutrition
 Equipement \$400.0 X 30.....\$ 12.000.00
 Fonctionnement
 Salaire 30 responsables
 à \$80.00 mois.....\$ 28.800.00
 Salaire 30 responsables à
 \$25.00 le mois.....\$ 9.000.00
 Nourriture pour 30 centres
 \$150.00 X 12 X 30.....\$ 54.000.00
 Divers(combustibles et autres)
 \$30.00 X 12 X 30.....\$ 10.000.00
 Sous-Total établissement 30 centres \$114.600.00

2-6 Activités agricoles
 Supplément salaire pour
 30 agents d'extension
 à \$40.00 par mois.....\$ 14.400.00
 Semences, engrais, insecti-
 cides et autres.....\$ 36.560.00 ✓
 Sous-Total activités agricoles.....\$ 50,960.00

2-7 Contrôle
 Supervision \$9.880.00
 Evaluation \$3.000.00
 Follow-up \$3.000.00
 Sous-Total contrô-
 le.....\$15,880.00

III.- MATERIEL & EQUIPEMENT

Matériel pour entraînement,
 planning familial, médicaments, vaccins,
 Fournitures pour Bureau et centres.....\$ 18.660.00 ✓

TOTAL(I + II + III).....\$ 300.000.00

Résumé Budget 1ère Année

| | AID | GOH/Apport local |
|----------------------------|---------------|-------------------|
| I.- Personnel | \$ 39.900.00 | \$12.720.00 |
| II.- Activités & facilités | \$ 241.440.00 | 2.000.00 |
| III.-Matériel & équipement | \$ 18.660.00 | |
| T O T A L | \$ 300.000.00 | <hr/> \$14.720.00 |

**BUDGET
2^e ANNEE**

| | AID | GOH/Apport local |
|---|---------------|------------------|
| I.- PERSONNEL | | |
| Directeur..... | \$ 6.000.00 | 2.160.00 |
| Administrateur..... | \$ 5.400.00 | 2.160.00 |
| Assistant-Directeur..... | \$ 5.100.00 | 1.440.00 |
| Médecins (2)..... | \$ 9.000.00 | 2.880.00 |
| Agronome (1)..... | \$ 4.200.00 | 1.440.00 |
| Infirmière (1)..... | \$ 3.600.00 | - |
| Secrétaire-bilingue.(1)..... | \$ 1.800.00 | - |
| Archiviste-statisticienne(1)..... | \$ 1.440.00 | - |
| Dactylographe (1)..... | \$ 960.00 | 480.00 |
| Chauffeurs.....(2)..... | \$ 1.920.00 | 1.440.00 |
| Messager (1)..... | \$ 480.00 | 720.00 |
| | \$ 39.900.00 | 12.720.00 |
| II.- ACTIVITES & FACILITES | | |
| Véhicule tout terrain (1) | \$ 7.500.00 | - |
| Gazoline, lubrifiant et entretien..... | \$ 3.000.00 | 800.00 |
| Recyclage personnel..... | \$ 1.500.00 | - |
| Fonctionnement 30 centres de Nutrition..... | \$102.600.00 | 12.000.00 |
| Activités agricoles | \$ 48.960.00 | 2.000.00 |
| Supervision, Evaluation, follow-up..... | \$ 22.880.00 | - |
| | \$186.440.00 | 14,800 |
| III.- MATERIEL & EQUIPEMENT | | |
| Matériel pour recyclage, planning familial, médi- cament, vaccins, fourni- ture de Bureau etc..... | \$ 23.660.00 | 2.000.00 |
| | \$ 250.000.00 | 29.520.00 |

RESUME BUDGET 2^e ANNEE

| | AID | GOH/Apport local |
|----------------------------------|----------------------|------------------|
| I.- PERSONNEL..... | \$ 39.900.00 | 12.720.00 |
| II.- ACTIVITES & FACILITES..... | \$ 186.440.00 | 14.800.00 |
| III.- MATERIEL & EQUIPEMENT..... | \$ 23.660.00 | 2.000.00 |
| | \$ 250.000.00 | 29.520.00 |
| TOTAL | \$ 250.000.00 | 29.520.00 |

BUDGET
3^e ANNEE

| | AID | GOH/Apport local |
|--|--------------|------------------|
| I.- PERSONNEL | | |
| Directeur..... | \$ 6.000.00 | 2.160.00 |
| Administrateur..... | \$ 5.400.00 | 2.160.00 |
| Assistant-Directeur..... | \$ 5.100.00 | 1.440.00 |
| Médecins (2)..... | \$ 9.000.00 | 2.880.00 |
| Agronome (1)..... | \$ 4.200.00 | 1.440.00 |
| Infirmière (1)..... | \$ 3.600.00 | - |
| Secrétaire-bilingue..... | \$ 1.800.00 | - |
| Archiviste-statisticienne (1) \$ | 1.440.00 | - |
| Dactylographe..(1)..... | \$ 960.00 | 480.00 |
| Chauffeurs (2)..... | \$ 1.920.00 | 1.440.00 |
| Messenger (1)..... | \$ 480.00 | 720.00 |
| Sous-total | \$ 39.900.00 | 12.720.00 |
| II.- ACTIVITES & FACILITES | | |
| Gazoline, lubrifiant, Entretien..... | \$ 3.000.00 | 800.00 ✓ |
| Fonctionnement 30 centres de nutrition..... | \$ 75.600.00 | 27.000.00 |
| Activités agricoles..... | \$ 39.500.00 | 11.460.00 |
| Supervision, Evaluation follow-up..... | \$ 22.880.00 | - |
| Sous-total | \$140.980.00 | 39.260.00 |
| III.- MATERIEL & EQUIPEMENT | | |
| Matériel pour recyclage, planning familial, médi- cament, vaccins, fourni- ture de Bureau etc | \$ 19.120 | 2.780.00 ✓ |
| TOTAL (I + II + III) | \$200.000.00 | 54.760.00 |

RESUME BUDGET 3^e ANNEE

| | AID | GOH/Apport local |
|---------------------------------|--------------|------------------|
| I.- PERSONNEL..... | \$ 39.900.00 | \$ 12.720.00 |
| II.- ACTIVITES & FACILITES..... | \$140.980.00 | 39.260.00 |
| III.- MATERIEL & EQUIPEMEN..... | \$ 19.120.00 | 2.780.00 |
| TOTAL | \$200.000.00 | 54.760.00 |

BUDGET
4^e ANNEE

| | AID | GOH/Apport local |
|---|---------------------|-------------------|
| I.- PERSONNEL | | |
| Directeur..... | \$ 6.000.00 | 2.160.00 |
| Administrateur..... | \$ 5.400.00 | 2.160.00 |
| Assistant-Directeur..... | \$ 5.100.00 | 1.440.00 |
| Médecins (2)..... | \$ 9.000.00 | 2.880.00 |
| Agronome (1)..... | \$ 4.200.00 | 1.440.00 |
| Infirmière (1)..... | \$ 3.600.00 | - |
| Secrétaire-bilingue (1)..... | \$ 1.800.00 | - |
| Archiviste-statisticienne (1) | 1.440.00 | - |
| Dactylographe (1)..... | \$ 960.00 | 480.00 |
| Chauffeurs (2)..... | \$ 1.920.00 | 1.440.00 |
| Messager (1)..... | \$ 480.00 | 720.00 |
| Sous-total | <u>\$ 39.900.00</u> | <u>12.720.00</u> |
| II.- ACTIVITES & FACILITES | | |
| Gazoline, lubrifiant, Entretien..... | \$ 3.000.00 | 800.00 ✓ |
| Fonctionnement 30 cen- tres de Nutrition..... | \$ 66.480.00 | 35.120.00 |
| Activités agricoles..... | \$ 20.000.00 | 30.960.00 |
| Supervision, Evaluation, follow-up..... | \$ 10.000.00 | - |
| Sous-total | <u>\$ 99.480.00</u> | |
| III.- MATERIEL & EQUIPEMENT | | |
| Matériel pour recyclage, planning familial, médi- caments, vaccins, fourni- tures de Bureau etc..... | \$ 10.620.00 | <u>3.000.00</u> ✓ |
| TOTAL (I + II + III) | <u>\$150.000.00</u> | 83.600.00 |

RESUME BUDGET 4^e ANNEE
AID

| | AID | GOH/Apport local |
|--|---------------------|------------------|
| I.- PERSONNEL..... | \$ 39.900.00 | 12.720.00 |
| II.- ACTIVITES & FACILITES..... | \$ 99.480.00 | 67.880.00 |
| III.- MATERIEL & EQUIPEMENT | \$ 10.620.00 | 3.000.00 |
| TOTAL | \$150.000.00 | 83.600.00 |

**BUDGET
5^e ANNEE**

| | AID | GOH/Apport local |
|--|--------------|------------------|
| I.- PERSONNEL | | |
| Directeur..... | \$ 6.000.00 | |
| Administrateur..... | \$ 5.400.00 | \$2.160.00 |
| Assistant-Directeur..... | \$ 5.100.00 | 2.160.00 |
| Médecins (2)..... | \$ 9.000.00 | 1.440.00 |
| Agronome (1)..... | \$ 3.600.00 | 2.880.00 |
| Infirmière (1)..... | \$ 3.600.00 | 1.440.00 |
| Secrétaire-bilingue..... | \$ 1.800.00 | - |
| Archiviste-statisticienne (1)..... | \$ 1.440.00 | - |
| Dactylographe (1)..... | \$ 960.00 | - |
| Chauffeurs (2)..... | \$ 1.920.00 | 480.00 |
| Messenger (1)..... | \$ 480.00 | 1.440.00 |
| | \$ 39.900.00 | 720.00 |
| Sous-total | | 12.720.00 |
| II.- ACTIVITES & FACILITES | | |
| Gazoline, lubrifiant, Entretien..... | \$ 2.000.00 | 800.00 ✓ |
| Fonctionnement 20 cen- tres Nutrition..... | \$ 61.100.00 | 41.500.00 |
| Activités agricoles..... | \$ 10.000.00 | 40.960.00 |
| Supervision, Evaluation, follow-up..... | \$ 5.000.00 | - |
| | \$ 78.100.00 | - |
| Sous-total | | 83.260.00 |
| III.- MATERIEL & EQUIPEMENT | | |
| Matériel pour récyclage, planning familial, médicaments, vaccins, fournitures de Bureau etc.... | \$ 3.000.00 | 3.000.00 ✓ |
| TOTAL (I,II,III) | \$121.000.00 | 98.980.00 |

RESUME BUDGET 5^e ANNEE

| | AID | GOH/Apport local |
|----------------------------------|---------------------|------------------|
| I.- PERSONNEL..... | \$ 39.900.00 | \$12.720.00 |
| II.- ACTIVITES & FACILITES..... | \$ 78.100.00 | 83.260.00 |
| III.- MATERIEL & EQUIPEMENT..... | \$ 3.000.00 | 3.000.00 |
| T O T A L | \$121.000.00 | 98.980.00 |

BUREAU DE NUTRITION

Rapport des activités Année 1974

| Centres | N. d'enf. | N. de mères éduquées | N. séances éducatives | N. Oedèmes N. | % | décès | % | N. de supervision | Contrôle après-exé |
|-------------------------|-----------|-------------------------|--------------------------|------------------|-------|-------|-------|----------------------|-----------------------|
| Portail Léogane | 128 | 94 | 157 | 73 | | | | | |
| Carrefour | 122 | 94 | 232 | 39 | 57.03 | 19 | 14.84 | 13 | 209 |
| Collin | 120 | 85 | 172 | 38 | 31.96 | 2 | 1.63 | 4 | 403 |
| Carrefour Vert | 117 | 60 | 114 | 11 | 31.66 | 9 | 7.5 | 12 | 21 |
| Croix des Pères | 107 | 72 | 183 | 20 | 9.40 | 4 | 3.41 | 4 | 148 |
| Ca Ira | 78 | 38 | 104 | 17 | 18.69 | 2 | 1.86 | 5 | 118 |
| Plaisance | 72 | 46 | 70 | 6 | 21.79 | 4 | 5.12 | - | 192 |
| Carice | 72 | 44 | 105 | 6 | 8.33 | - | - | 11 | 133 |
| Brooklyn | 113 | 72 | 199 | 21 | 8.33 | - | - | 8 | 35 |
| Bélaïr (Sans Fil) | 116 | 83 | 116 | 18 | 18.58 | 8 | 7.07 | 14 | 175 |
| Montrouis | 122 | 74 | 197 | 25 | 15.51 | 5 | 4.31 | 17 | 193 |
| Ile à Vaches | 53 | 21 | 64 | 3 | 20.49 | 1 | 0.81 | 10 | 200 |
| Terre Neuve | 123 | 48 | 145 | 14 | 5.66 | - | - | 2 | - |
| Trianon | 117 | 93 | 166 | 15 | 11.38 | 4 | 3.25 | 6 | 359 |
| Fond Michel | 115 | 85 | 108 | 21 | 12.82 | 6 | 5.12 | 5 | 74 |
| Ennery | 119 | 84 | 106 | 11 | 21.73 | 5 | 4.34 | 12 | 75 |
| Dondon | 119 | 32 | 53 | 8 | 9.24 | 1 | 0.84 | 3 | 25 |
| Grande Savanne | 79 | 27 | 75 | 2 | 6.72 | 5 | 4.20 | 5 | 4 |
| Laurent | 78 | 50 | 142 | 10 | 2.53 | 1 | 1.26 | 4 | 57 |
| Fonfrede | 56 | 21 | 143 | 3 | 12.82 | 1 | 1.28 | 5 | 186 |
| Hôpital du Cap | 80 | 27 | 106 | 1 | 5.35 | 3 | 5.35 | 6 | 105 |
| Anse Rouge | 63 | 23 | 85 | 2 | 1.25 | - | - | 7 | 124 |
| Boucan Patriot | 117 | 41 | 113 | 15 | 3.17 | - | - | 5 | 84 |
| L'Arbre | 93 | 34 | 163 | - | 12.82 | 2 | 1.70 | 7 | 239 |
| Jean Rabel | 74 | 29 | 67 | 8 | - | - | - | 4 | 220 |
| Bombardopolis | 110 | 45 | 42 | 23 | 10.81 | 7 | 9.40 | 6 | 46 |
| Jacmel | 121 | 52 | 161 | 25 | 20.90 | 5 | 4.51 | 6 | 537 |
| St Raphael | 47 | 27 | 65 | 2 | 20.66 | 6 | 4.95 | 5 | 200 |
| St Michel de l'Attalaye | 120 | 61 | 81 | 19 | 4.25 | 1 | 2.12 | 3 | 48 |
| Gros Morne | 117 | 60 | 192 | 14 | 15.83 | 4 | 3.33 | 5 | 61 |
| Pernier | 64 | 33 | 70 | 15 | 11.96 | 4 | 3.41 | 3 | 69 |
| Daranne | 85 | 44 | 151 | 12 | 23.43 | - | - | 8 | 60 |
| | | | | 1 | 14.11 | 1 | 1.17 | 1 | 652 |

Activités Année 1974 (suite)

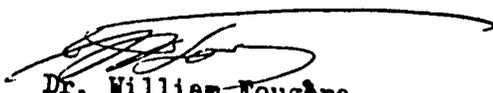
| Centres | N. d'enf. | N. mères éduquées | N. séances éducatives | N. Oedèmes | % | Décès | % | N. de Supervisions | Contrôle après exéat |
|--------------------------|-------------|----------------------|--------------------------|------------|--------------|------------|------------|-----------------------|-------------------------|
| Case à Foleur | 42 | 29 | 46 | 5 | 11.90 | 1 | 2.38 | 3 | 12 |
| Quivalierville | 37 | 13 | 55 | 1 | 2.70 | - | - | 1 | - |
| Colan Idai | 38 | 15 | 24 | 1 | 2.63 | 1 | 2.63 | 2 | 19 |
| Case à Galets (Gonave) | 101 | 60 | 50 | 4 | 3.96 | 1 | - | 7 | 233 |
| Mucis | 25 | 12 | 29 | - | - | - | - | 3 | 24 |
| Case Fossette | 27 | 9 | 32 | 3 | 11.11 | 1 | 3.70 | 2 | 13 |
| Case Gaudray | 23 | 12 | 50 | - | - | - | - | 2 | 47 |
| Case Aniche | 18 | 9 | 26 | 1 | 5.55 | - | - | 2 | - |
| Case Porte | 17 | 7 | 33 | 1 | 5.88 | - | - | 1 | - |
| Case Iburon | 24 | 12 | 41 | 1 | 4.16 | 1 | 4.16 | 5 | 65 |
| Case Bourg Champagne | 45 | 13 | 16 | - | - | - | - | 1 | - |
| Case Galet (Petit Goave) | 32 | 25 | 42 | 5 | 15.62 | 1 | 3.25 | 1 | - |
| Total | 3546 | 1835 | 4398 | 519 | 14.60 | 116 | 3.2 | 236 | 5517 |

BUDGET pour 5 ANS

RESUME

| | Apport AID | Apport GOH/Apport local |
|-----------|---------------|-------------------------|
| 1976..... | \$ 300.000.00 | \$ 14.720.00 |
| 1977..... | \$ 250.000.00 | \$ 29.520.00 |
| 1978..... | \$ 200.000.00 | \$ 54.760.00 |
| 1979..... | \$ 150.000.00 | \$ 83.600.00 |
| 1980..... | \$ 121.000.00 | \$121 .160.00 |

Plus

25,000
(TACH)


Dr. William Fougère
Directeur.

The two principal activities in the project will be:

1. To enlarge the population coverage of nutrition rehabilitation centers through the establishment of new operating units and to support on-going units.
2. The refinement of different designs for nutrition rehabilitation centers to serve different types of areas (isolated, rural, urban, etc.)

This project will build on the extensive nutrition studies and activities that have been carried out in Haiti and in other countries. The project uses an interdisciplinary approach that focuses on (a) providing practical nutrition education; (b) attacking the major infectious diseases and (c) increasing agricultural production. The amount of financing devoted to agricultural production in this project is relatively limited for several reasons: (a) the major AID agricultural efforts will be carried on as part of the other agricultural projects, e.g. project 069 (Agricultural Development Support) and project 076 (integrated agricultural development); (b) it appears that a high percentage of Haitian families have enough income to provide adequate nutrition for their children, even with present poor agricultural technology and that the problem is not in most cases a net protein deficiency in the family but is instead an unwise distribution of the protein among the members of the family

The bureau of Nutrition of the Ministry of Health is now staffed with experienced personnel and currently operating seven centers and supervising 13 others and has the capacity to establish and monitor up

to twenty additional centers once the personnel to manage each center are trained. Each new center requires one person in daily attendance to take care of thirty children and five to six of the mothers.

The basic educational components in the project are for (1) nutrition center personnel and (2) mothers. Each center will continue to have a sub-professional trained in health care or nursing plus home economics appropriate to the food activity pattern of the poor household of Haiti.

The sub-professionals will continue to be trained in the Nutrition Bureau classrooms in Port-au-Prince, followed by practical training under a previous trainee as intern in an on-going center. The personnel are girls from rural households and then will thus be able to manage the rural center alone, living there, but with monthly visits from the bureau staff. Annually they will be brought back into the classroom for refresher courses and a little advanced or broadening training such as in Family Planning. The second level of education will be that performed by the center manager. Her task will be one of teaching mothers how to provide better care for their children, not only by teaching the preparation of better mixtures of nutrient foods but also by the teaching of games, activities and songs.

This project will finance nutritional education activities which have been able to rehabilitate on a permanent basis approximately two-thirds of the children with serious malnutrition and to educate the mothers on good nutrition.

In particular, food supplements are to be of indigenous origin and produced locally in the home area. There will also be education activities in the form of radio broadcasts, posters, etc.

One of the activities under the project will be to help the Ministry of Health incorporate nutrition activities into the core of the health delivery system and thus create a better distribution of its resources between urban (public and private) and rural (largely non existent) services.

The project will enable the MOH to fund the establishment of approximately ten new nutrition centers during FY 1976, based on the potential to integrate these into the regular functions of the MOH, adding to these centers the type of family planning approaches that are appropriate to areas where non-professional delivery services must be used for many years. Another important aspect will be to incorporate nutrition elements into the health clinics and dispensaries already operating. The agricultural activities are limited because of the difficulty of offering the necessary range of agricultural services within the framework of the project. There will be, however, opportunities to introduce new varieties and new commodities known to be grown under similar conditions elsewhere. The important aspect of the agricultural activity is to realize that it will be basically a home garden experimental approach which in the absence of research trial may be a way of getting the more aggressive farmers to try new things.

At this point the exact geographic coverage has not been mapped out in detail in the sense that a list of locations for the centers and the time sequence of their establishment has not been prepared. This geographic coverage will result from the on-going epidemiologic survey which indicates which localities are in need of such assistance, "Needs" will be modified by many environmental and development factors. Drought

in one area, a flood in another, a successful agricultural improvement effort elsewhere can and will continue to modify the nutritional picture and effect project strategy and implementation.

Several of the centers operated by voluntary agencies will continue to use Title II foods to supplement the available foods in the market but in general the project will avoid non-indigenous foods. These Title II foods, however, will be usually prepared in the center along with the local corn meal, beans, manioc, etc.

The teaching of how to prepare foods will be limited to locally produced materials, thus meeting the point that a nutritious diet can be maintained using a strictly Haitian product mixture.

The AID financed nutrition work will be closely coordinated with the other nutrition activities of the Gouvernement including the "Programme de Nutrition et de Developpement Rural (PRONDUDERU)" (Program of Nutrition and Rural Development) which is being supported by UNDP, PAHO, and UNICEF.

Coordination will also be effected with the established responsible institutions, CONADEP, PAM, HACHO, OPS/OMS, (PRUDEM), FAO, UNICEF, PNUD, CARE, CRSI, CWS, OXFAM, CRU, and other agencies and institutions with activities in the field of nutrition.

A coordination Committee has been formed for this effort which consists of seven representatives of several Ministries. In the implementation of the GCH/AID nutrition project, AID plans to work very closely with the Coordination Committee.

Simultaneously with planning and implementing new centers, an evaluation of the least cost combination of center activities

will begin with the principal objective being to determine the most cost/effective combination of center inputs for each area, rural, urban, mountain, coastal, etc. From this study a center typology with associated costs and range of effectiveness may be possible which could serve as a guide in estimating the costs of a national program. The results will be used with the MOH to develop policies on the delivery of health services and nutrition and family planning.

The evaluation skills in Haiti will need to be supplemented by out-side technical assistance of a person trained in systems analysis of health activities. It is estimated that approximately three more months would be required to complete the evaluation and to develop the typology.

Furthermore it is expected that the evaluation studies, identifying the interrelations between other components of center activities, food production, water potatilty and availability, and the minimal health care needs and family planning will provide guidance to AID and other donors on the transferability of the project approach.

A reasonable expectation of achieving the project purpose is soundly based on the fact that the program design is proven by 10 years of successful operation and refinement and has attained the purpose as stated below in the geographical areas where it has previously operated. The conditions indicating achievement of the project purpose at the end of the project will be (1) elimination of severe forms of malnutrition such as marasmus and kwashiorkor and (2) reduction of 1-4 year mortality from 45 to 11 per 1,000 of population in the project area.

DEPARTMENT OF STATE
AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D. C. 20523

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ASSISTANT
ADMINISTRATOR

PROJECT AUTHORIZATION AND REQUEST FOR ALLOTMENT OF FUNDS

Name of Country: Haiti
Name of Project: Nutrition Improvement
Project Number: 521-075

Pursuant to Part I, Chapter 1, Section 103 of the Foreign Assistance Act of 1961, as amended, I hereby authorize an increase to a prior grant to the Government of Haiti (the "Grantee") of not to exceed Four Hundred Eighty-One Thousand United States Dollars (\$481,000) to help in financing certain foreign exchange and local currency costs of goods and services required for expansion of the activities under the Nutrition Improvement project (the "Project"). In prior fiscal years, AID authorized \$1,289,000 for this Project, of which \$1,190,000 has heretofore been granted to the Grantee.

I hereby authorize the initiation of negotiation and execution of an amendment to the Project Agreement by the officer to whom such authority has been delegated in accordance with AID regulations and Delegations of Authority, subject to the following essential terms and covenants and major conditions, together with such other terms and conditions as AID may deem appropriate:

I. Source and Origin of Goods and Services

Goods and services, except ocean shipping, financed by AID under the Project shall have their source and origin in the United States or Haiti, except as AID may otherwise agree in writing. Ocean shipping shall be of United States source and origin.

II. Conditions Precedent to Disbursement

Prior to any disbursement, or to the issuance of any commitment documents under the amended Project Agreement, the Grantee shall furnish, in form and substance satisfactory to AID, the following:

(a) A plan of action for FY 1980 for each section of the Bureau of Nutrition ("BON");

(b) A scope of work and schedule of rotation for BON nutritionists during FY 1980;

(c) A schedule for the supervision of all BON financed nutrition centers in FY 1980;

(d) An approved budget for Grantee counterpart contributions to the Project for FY 1980; and

(e) A revision of the norms for the Nutrition Education and Rehabilitation Centers ("CERNS"), including criteria for (i) location of and length of stay at the CERNS, (ii) admission and exit of children, (iii) length of stay of children, (iv) age of children attending, and (v) use of "Road-to-Health" cards as motivational tools.

III. Counterpart Contribution

Based on the rationale set forth in the Action Memorandum from LAC/DR, Marshall Brown, for this Project Authorization and Request for Allotment of Funds, I hereby waive for this Project the requirement of section 110(a) of the Foreign Assistance Act of 1961, as amended, that a recipient country contribute at least 25% of the costs of a project.

James H. Brown
Assistant Administrator
Bureau for Latin America
and the Caribbean

July 27 1979
Date

Clearances:

| | | |
|----------------------|--------------------|---------------------|
| GC/LAC, J. Kessler | <u><i>JK</i></u> | date <u>7/25</u> |
| LAC/CAR, E. Nadeau | <u><i>EN</i></u> | date <u>7/25</u> |
| LAC/DR, L. Armstrong | <u><i>L.A.</i></u> | date <u>7/24</u> |
| LAC/DR, H. Bassford | <u><i>H.B.</i></u> | date <u>7/26</u> |
| LAC/DR, M. Brown | <u><i>M.B.</i></u> | date <u>7/27/79</u> |

GC/LAC:GMW/ter:ec:7/3/79:x29182

JUL 27 1979

ACTION MEMORANDUM FOR THE ASSISTANT ADMINISTRATOR (LAC)

FROM: LAC/DR, Marshall D. Brown

Problem: Amendment of Project Authorization for the Haiti Nutrition Improvement Grant Project (521-0075) to provide additional funds to permit the continuation of Project activities and the work of the Bureau of Nutrition (BON) of the Department of Public Health and Population (DSPP).

Discussion: The Nutrition Improvement Project Agreement was signed on May 31, 1976. Grant funds of \$1.289 million were authorized for life of project, to assist the Bureau of Nutrition (BON) to: (1) provide Haitian mothers with knowledge of the best choice of available foods and food preparation required for good health; (2) protect mothers and children against serious infectious diseases; (3) teach farm families to grow more nutritious food crops; and (4) determine the most cost effective alternative for reducing the malnutrition of the poor in Haiti. Project activities include funding the operations of the BON, establishment of 36 mothercraft centers, refinement of the design and operations of the centers, incorporation of BON services into the rural health delivery system, and the promotion of agricultural activities working in coordination with the nutrition programs of the centers.

The scale of project implementation to date has, in fact, exceeded the projections of the original Project Paper. The decision to expand the scope of project activities was based on a joint review and analysis by the GOH and USAID/Haiti. At the time of this decision (1977), the follow-on intersectoral Nutrition Development Project was anticipated for FY 1979 and was expected to provide funding for activities which the BON now wishes to undertake through this Project. The delay in the follow-on project has resulted in the Mission's request for additional funds. The attached amendment to the Project Authorization (Tab A) will provide an additional \$481,000 for: (1) project activities that have been expanded beyond the scope described in the PP; and (2) performance of additional research on certain elements of the nutrition improvement approach being implemented under this Project. The detailed justification for the increased funding of this Project, submitted by the Mission, is attached as Tab B.

It is requested that Section 110(a) of FAA requiring a 25% counterpart contribution be waived. The GOH contribution to the Project is \$304,920 or about 15% of the total project cost after the requested increase (\$1.77 million). The primary justification for a waiver is Haiti's status as one of the relatively less developed countries (RLDCs). Further, because many of the activities financed by the project are essentially demonstration and experimental in nature, it would be unreasonable to expect a

larger commitment of scarce GOH resources until it is clear that the Project's approach to the nutrition problem is successful.

An Advice of Program Change for this Project was submitted to Congress on July 10, 1979 and the waiting period expired on July 24, 1979, without objection.

Recommendation: That you approve the increase in project funding and waive the requirement of Section 110A of the FAA as amended by signing the attached PAF Amendment.