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COOK ISLANDS

EVALUATION OF IHAP PROJECT

"Cook Islands Agricultural Diversification Project"

AID Grant #879-0251-G-00-1001

undertaken by:

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I. COUNTRY PROFILE

The fifteen Cook Islands - thirteen of which are inhabited by approximately 18,000 people - constitute a total land area of 240 square kilometers scattered over 2.2 million square kilometers of sea. The largest island (85 sq. km.), Rarotonga, is also the center of government and contains about half of the total population of the country. The December 1981 census showed the population by islands to be: Rarotonga, 9,477; Aitutaki, 2,348; Atiu, 1,225; Mangaia, 1,364; Mauke, 684; Mitiaro, 256; Manihiki, 405; Manuae, 12; Nassau, 134; Palmerston, 51; Penryhn, 608; Pukapuka, 787; and Rakahanga, 269.

The Cooks are an internally self-governing state in free association with New Zealand.

All of the Cook Islands lie within the hurricane zone. Their climate ranges from warm and humid to mild and equable, depending upon the time of year and the island concerned.

The economy of the islands is largely agricultural, including fishing, and is to a considerable extent, of a subsistence sort. The primary products are coconuts, fish, bananas, citrus, pineapple, maniota, sweet potatoes and taro. Coffee, cocoa, tomatoes and other speciality crops are produced in modest quantities. Livestock includes cattle, pigs and goats, and is essentially for home consumption. Some mother of pearl shell is also collected, mostly for export. In addition to local handicrafts, there is a fruit cannery and two clothing factories in the industrial sector. Tourism has become an increasingly important industry and source of foreign exchange.

Primary education is free and compulsory and many students go on to secondary education and a few to higher education abroad.

Free medical and surgical treatment is available to all Cook Islanders with a general hospital in Rarotonga and cottage hospitals or dispensaries in the outer islands.

A major source of revenue is the remittance of overseas Cook Islanders, mainly in New Zealand. The other side of this benefit is the decline in the population, due to emigration, causing a serious loss of skilled workers and the most economically productive element of the population. This, in turn, acts as an impeding factor in economic development as well as the cause of social problems.

II. PROJECT BACKGROUND

In May 1981, the Agency for International Development approved Grant No. 879-0251-G-00-1001 in the amount of $165,800, subsequently amended, on 30 July 1983, to $355,156. This sum, coupled with an estimated contribution of $404,337 from the Cook Islands Government and $8,171 directly from IHAP provided a total of approximately $768,664 for a project entitled "Cook Islands Agricultural Diversification Project." The project was originally intended to be of three years duration, but was subsequently amended to run for over four years, from 18 May 1981 to 30 September 1985.

While the project paper for this project is silent on the broader purposes of the project, during the execution of the project it became accepted by all concerned that these larger purposes were: (a) the promotion of economic development, and simultaneously (b) the arresting and reversal of the emigration of its people to New Zealand.

The project is directed at the diversification and expansion of

agricultural production for purposes of improving subsistence, developing import substitutes, increasing cash sales, expanding exports, and generating cash incomes. Emphasis is on the development of non-perishable high-value crops in order to both alleviate transportation difficulties and increase family incomes above levels that would otherwise be met with crops of lower unit value.

These braod goals are consistent with the development goals and strategy of the Cook Islands First Development Plan 1982-1985, which provides that "during the Plan period, government and development funds will mainly be allocated to agriculture, fisheries development, tourism and small-scale industries."

III. PROJECT COMPONENTS

The specific sub-sectors addressed by the project and the goals for each of those sub-sectors are as follows:

(1) Citrus planting: 175 acres were to be planted over the life of the project; and land preparation grants of $290 per acre up to 1.5 acres per farmer were to be made in this connection.

(2) Copra production expansion: tools and equipment were to be procured for coconut seedling nursery expansion, and scales were to be procured for weighing copra; and a revolving fund was to be established to provide credit for the construction and replacement of copra drying facilities.

(3) Coffee production expansion: participant training was to be provided in Papua New Guinea for two field staff members in coffee growing

and processing; farmer training was to be provided in coffee growing; processing and spraying equipment was to be supplied for the rehabilitation of 10 acres of derelict coffee plantation; fertilizer was to be provided; support was to be given to the Ministry of Agriculture (MOA) in its 3-year program for the establishment of 35 acres of new coffee planting by the procurement of nursery equipment and the provision of financial assistance to farmers for land preparation up to $263 per acre with a maximum of .5 acre per farmer.

(4) Speciality crop production expansion & diversification: the MOA was to be assisted in establishing a nursery in Rarotonga, in providing training offshore for two staff members of the MOA, and in farmer training in growing fruit crops such as pawpaws, mangoes, avocadoes, lichi and macademia nuts.

(5) Food crops introduction and expansion: taro production was to be introduced in Mangaia and Atiu by providing assistance in the reclamation of taro farmland that had been silted over, and by providing farmer training in taro cultivation. Also, planting material required for the introduction of new crops such as peanuts, irish potatoes and onions was to be procured.

(6) Livestock upgrading: improved stock for breeding with local sheep, goats and pigs was to be imported; incubation equipment was to be provided for the hatching of imported poultry eggs, and equipment was to be installed in the hatchery to produce chicks for eventual integration in backyard flocks.

(7) Consultancy/Agricultural Radio Program/Agricultural Exhibition Prizes: services of a coffee growing and processing expert for three months were to be obtained; finances were to be made available for the MOA sponsorship of a weekly agricultural radio broadcast, and prizes were to be provided for government distribution at agricultural exhibitions.

IV. EVALUATION METHODOLOGY

It is the aim of this evaluation:

1. to determine the extent to which the aforementioned planned targets of the project have been achieved;
2. to appraise the effectiveness of the project in contributing to the achievement of economic and social development of the Cook Islands and the anticipated deceleration of migration associated with development;
3. to identify unplanned results and their implications;
4. to ascertain the reasons for successes or failure of a given activity;
5. to determine if the design of this project is appropriate for continuation; and
6. to recommend future actions based on the achievements and experiences of this project and the insights gained therefrom.

The evaluation was conducted in June and July 1984 by Mr. Leonard Maynard, a consultant employed by International Human Assistance Programs, Inc. (IHAP), the grantee. Information was obtained through:

(a) review and analysis of relevant documents; (b) interviews with His Excellency, Hon. Pupuke Robati, Deputy Prime Minister and Minister for Outer Island Affairs, and His Excellency, Mr. Tangata Simiona, the Minister of Agriculture, as well as

with officials of the Ministry of Agriculture, Department of Planning, the Ministry of Marine Resources and Fisheries, members of Island Councils and the general public, and IHAP, and (c) direct observation of project sites, as feasible. A complete list of persons interviewed is shown in Attachment A to this report. The evaluation report was drafted in the Cook Islands and its principal findings, conclusions and recommendations were discussed with the concerned officials of the Government, the IHAP Project Advisor, and IHAP home office staff.

The Cook Islands are dispersed over 2.2 million sq. km. of ocean. Transportation by boat is slow; by air, it is infrequent and expensive. However, the project's activities on the islands of Rarotonga, Mauka, Mitiaro and Atiu, were visited, and these islands account for two-thirds of the country's population. This direct observation confirmed the project status information obtained by reference to records and by interviews with the Government officials concerned.

The excellent cooperation and sustained cordiality of everyone encountered in the course of this evaluation is hereby acknowledged.

V. PROJECT STATUS

A. Introduction

In general, all major components of the project are being effectively implemented and are on schedule. In the few cases of exception, valid reasons seem to underlie either non-performance or tardy performance.

Following is a brief account of progress and problems in the execution of the several project components.

B. Citrus replanting - At the time of this evaluation, 114 acres of citrus trees (mostly orange) had been planted, with 200 trees per acre. This includes the planting of both new acreage, the replacement of overage trees and the replacement of derelict and neglected orchards. This is essentially a smallholder program, with approximately 150 different farmers participating.

The MOA nursery has 40,000 young trees that are earmarked for replanting over the next 18 months, given the availability of land and other costs. This is enough for 200 additional acres of trees. The nursery has, in addition, 15,000 young seedlings that have not been budded and will therefore not be ready for replanting until later in 1985.

Given the inventory of nursery trees, it is clear that the 175 acre objective of the project will easily be met during the project's life.

The grant document provides for the $290/acre subvention for land preparation to be applied to both land clearing and soil preparation (ploughing, harrowing, lining and ripping) and, initially, this was the case with the MOA being compensated, in part, for its soil preparation work. Subsequently, the IHAP Project Manager limited payments from the project dollar budget to land clearing, on the grounds that soil preparation was properly part of the Government's contribution to the project.

In addition to assuming responsibilities for soil preparation, the MOA in general provides fertilizer and pesticides and arranges for pruning and weeding.

In some cases, hand preparation (clearing and soil preparation) had been undertaken by the grower, though this was infrequent; and accordingly almost all the 150 participating farmers took advantage of the land preparation provided by the project.

The planted land was observed to be well tended, so as to ensure healthy bearing trees within the next three years.

RECOMMENDATION #1:

It is recommended that should this project be extended that consideration be given to charging the growers a fee for land clearing, soil preparation, pesticides, fertilizers, etc. to be paid on a multi-year period after the trees begin to bear, thus reducing both project and MOA costs and expanding private sector participation.

C. Copra Production Expansion - Purusant to the immediate objectives of this component of the project, various tools (shovels, spades, forks, wheelbarrows) have been procured and delivered to MOA coconut tree nurseries. The Government's nursery program is on schedule with 20,000 seedlings in being. Also, pursuant to the requirements of the grant, three copra weighing scales were procured by IHAP and distributed to selected islands of the Northern Group.

Also, as called for by the project, a revolving fund to provide credit for purchasing copra drying facilities has been established. This fund is administered by the Treasury and the Department of Development Planning. The MOA approves applicants for credit and procures kiln construction material and distributes it to the farmers, through the Chief Administrative Officer (C.A.O.) of each island. Loan repayments from outer island

borrowers also pass through the CAO to the Treasury. Complete information on the number of loans from the revolving fund was not available from most of the islands, but on Atiu, five applicants had been approved. Of these, four had constructed and put to use a drying facility. The fifth was holding his loan because his old drier was still functioning. Although profits from copra have been good recently, particularly for those using new driers, loan repayments have been slow. In Atiu, this is partially due to problems of bookkeeping and the transfer of funds, which are being done by the local post office. It is anticipated that the revolving fund will be replenished by the borrowers and will continue, therefore, to provide credit for the construction of copra kilns.

This component of the project, accordingly, may be said to have been completed.

RECOMMENDATION #2:

It is recommended (and this is the MOA position) that a modest interest rate be charged by the revolving fund to pay for administrative costs and to set the stage for an increase in the size of the fund. Coverage of administrative costs in this fashion should also improve loan record keeping, as well as expand participation by the private sector.

D. Coffee Production Expansion - Three field staff officers of the MOA, one more than called for in the original plan, completed participant training in Papua New Guinea on coffee growing and processing, and they in turn have conducted coffee growing training for 12 farmers on Atiu and eight farmers on Mangaia. The project has also supplied pruning and spraying equipment for the rehabilitation of six acres of derelict

coffee plantation land on Atiu, Mangaia and Mitiaro. (Work towards a target of 10 acres was halted because it was determined that the farmers concenred did not have the capability to maintain and operate any additional agreage.) As called for in the grant agreement, fertilizer (and herbicides) were also supplied to the farmers concerned. In addition, three hand operated coffee bean hulling machines have been ordered. Upon arrival, they will be sent, one each, to Mangaia, Mitiaro and Mauke. Also, miscellaneous nursery equipment was provided to the MOA in support of its three-year program to establish 35 acres of new coffee plantings. To date, the MOA has accomplished 16 acres of new plantings.

While the grant has budgeted over $9,000 to assist farmers in land preparation for new coffee plantings, this money was not used, as land preparation cost was being borne either by MOA or the individual farmer himself.

The IHAP position of this component of the project can also be said to be completed, though on the government side, approximately 17 additional acres of coffee needs to be brought on line before this aspect can be said to have been fully implemented.

RECOMMENDATION #3:

It is recommended that IHAP moneys remaining in this component be concentrated on training farmers in the management of the newly planted coffee acreage as well as in the management of the older 29 acres on Atiu and the small acreages used for local consumption on Mangaia, Mauke and Mitiaro. Such training would help institutionalize the progress already made in this aspect of the project.

E. Specialty crop production expansion and diversification - As prescribed in the grant agreement, two MOA staff officers, an Agronomist and an Agricultural officer, were sent to Hawaii for horticulture training in the growing of various fruit trees including macademia, avocado, lichi, mango, sapodilla and calambola and in preparation techniques for nursery use. Since their return with financing from grant funds, seedlings of all the above trees have been imported from Hawaii and replanted in agricultural experimental stations in the southern group of islands. Additional trees are on order. Tools and equipment have been procured and distributed to these stations and particularly the station in Rarotonga, which the government has earmarked for upgrading. Some trees have been distributed to a few farmers in the southern islands with informal instructions on how to care for them. However, most trees have been retained at the agricultural stations for experimentation or propagation purposes. No formal training for farmers has yet been organized because of the limited number receiving trees, and accordingly, this component of the project has not yet been completed.

No green house construction has been undertaken, as provided for in the project budget. At present, the MOA does not believe that it can assume the recurrent costs involved in the maintenance of a green house.

RECOMMENDATION #4:

It is recommened that the funds allocated to greenhouse construction be used to procure additional nursery equipment.

RECOMMENDATION #5:

It is also recommended that steps be taken as soon as possible to organize farmer training in specialty crops, in order that this aspect of the project can be completed by the terminal date of the project, September 1985.

F. Food crop introduction and expansion - The project contributed materials (cements and wire meshing) for the construction of dams to rechannel water into 20 acres of silted taro land in Mangaia and reclaimed land in Atiu, because it was found that insufficient water was available for de-silting purposes. A taro cultivation workshop was held in Mangaia for 12 taro farmers from Mangaia and two each from the other six islands in the southern group. A similar workshop is planned to Atiu. Under the Project, two staff officers of MOA were sent to Hawaii for training in taro cultivation. Improved peanut seeds have been ordered from Australia for distribution to farmers in Atiu, Mauke and Mangaia. Inquiries are being made for Irish potatoes suitable for cultivation in the Cook Islands, but they have not yet been located. When these items have been procured and the workshop for Atiu held, this component of the project will have been completed.

G. Livestock upgrading - Three boars of an improved variety have been procured with IHAP financing and placed, respectively, with the school pig farm in Atiu, in the village communal compound in Mitiaro and in the custody of the MOA agricultural officer in Mauka, who will eventually convey it to the local primary school farm. These boars are available, without

charge, to service local sows with the intent that, in time, the island stock will be improved.

Early this year ten goats (two does, eight bucks), of a breed superior to the local one, were imported and distributed as follows: two does and two bucks to the livestock section, MOA, in Rarotonga, two bucks each to the Agricultural Officers on Atiu and Mangaia, and one buck each to the Agricultural Officers on Mauke and Aitutaki. The bucks are available, without charge, for interbreeding with local nannies. The use of the bucks on Rarotonga has already resulted in 40 pregnancies. The kids from the MOA does, after birth and weaning, will be donated to farmers of different islands to accelerate breed improvement.

A 200-chick incubator has been imported and loaned to an experienced private poultry raiser to determine its effectiveness in incubating eggs flown in from New Zealand. Interim results have shown 85% success in producing chicks. The MOA is now considering various options as to the eventual dispostion of the incubator following completion of the test operation. Whatever plan for the custody and operation of the incubator, the chicks produced will be distributed, at nominal rates, to a maximum number of households to improve backyard poultry.

This aspect of the project can also be said to have been completed.

H. Consultancy/Agricultural Radio Program/Agricultural Exhibition Prizes -

Consultant funds were used to procure the services of a coffee expert and a taro expert on a short-term basis, but substantial funds remain.

RECOMMENDATION #6:

It is recommended that the unobligated consultancy funds be used to engage short term experts in food preservation, livestock processing or poultry feed production.

The agricultural radio program was disapproved by A.I.D., according to the IHAP Project Manager, but the $3,000 allocation for this component remains on the record.

RECOMMENDATION #7:

This should be corrected and the funds also used to engage short-term consultants.

The budgeted funds for agricultural exhibition prizes are being expended for various in-kind prizes distributed at agricultural exhibitions. The prizes are in the values of $40, $30, and $20 for first, second and third, respectively.

RECOMMENDATION #8:

It is recommended that with USAID approval, prizes in the future be in cash rather than in-kind, on the grounds that cash prizes would be more attractive to the contestants.

I. IHAP Contribution - An IHAP contribution of $8,171 was budgeted for this project. At the time of this evaluation the obligation had not been met.

RECOMMENDATION #9:

It is recommended that IHAP proceed as soon as possible to fulfill this obligation, prior to the projected terminal date of the project.

VI. CONCLUSION

In sum, of the 7 project components almost all had been completed from a technical viewpoint, at the time of this evaluation, and the prospects for the remaining components to be completed by the project termination date appears to be good. In some components, such as (1) Coffee Production Expansion (2) Specialty Crop Production Expansion and Diversification and (3) Consultancy/Agricultural Radio Program/Agricultural Exhibition Prizes, it appears that there are sufficient funds remaining to provide the current planned project elements, owing in significant part to mid-course changes in the original plans (elimination of greenhouse, radio program and land preparation for coffee plantings, for example). As noted above, these remaining funds should be reprogrammed to accommodate supporting elements for several components that had not been identified in the original project plan, specifically to:

- train farmers in coffee management (see Recommendation #3);
- procure additional nursery equipment (see Recommendation #4);
- engage short term experts in food preservation, livestock processing and poultry feed production (see Recommendations #6 and #7).

Recommendations #1, #2, #5 and #8 are programmatic rather than financial in nature. For the time being Recommendation #1 may be ignored, since it pertains to an extension of the project beyond the present projected terminal date (to charge fees to farmers for soil preparation, etc.). Recommendations #2, #5 and #8, however, can be put into effect now, and IHAP should, as soon as possible, begin negotiations with the Cook Islands Government on these matters and, as necessary, with AID (Recommendation #10).

Recommendation #2 is to establish a modest interest rate in the revolving fund for copra drying facilities. Recommendation #5 is those steps to be taken to organize farmer training in specialty crops. Recommendation #8 is to change prizes from in-kind to cash.

In the larger context of the impact that the project has had on economic development and decelerating emigration, it is much too early to give a statistical assessment. To a very large extent, a favorable outcome in regard to development will depend on the ability of the Cook Islands to give priority to the institutionalization of the efforts undertaken in this project, probably with special emphasis on the training of farmers and MOA personnel. Additionally, a favorable outcome will depend on the ability of the government to cover recurrent costs of operation. The government is very much aware of these costs, unlike the governments of some other developing countries, and this must be considered a plus. More specifically, however, will be the government's willingness to establish and institutionalize arrangements whereby these costs can be shifted to the private sector, by, for example, charging fees for services rendered, including, as recommended herein for example, an interest charge in the revolving fund for copra drying facilities.

Though the government is aware of the need for such a shift in the carrying of recurrent cost burdens, the acutal implementation of policies needed to achieve this shift probably will not come easy, since it reflects a break with habits engrained in the body politic over many years, by, for example, early missionaries and later by official government donors who, while well-intentioned, have tended to perpetuate this tradition. For this reason it is proposed below to begin now the process of developing

the means to assist the Cook Islands Government in this difficult but by no means insurmountable task -- not insurmountable in large measure because of the constructive attitude of the government, the small farm population, and the impact that the current project has had across a wide spectrum of island agriculture.

The prospects for a positive impact on the emigration issue are less optimistic, since it appears that the comparative advantage for emigrating to New Zealand currently is significantly higher than remaining in the Cooks, and, theoretically at least, agricultural development would have to attain a rather high plateau to have a real impact on emigration, where the Islands calculate that there is no economic advantage to move to New Zealand. Accordingly, while the deceleration of emigration may be a long-term goal of the government, it probably, given the economic growth of New Zealand over which the Cooks has no control, should not, at this time in any event, be looked upon as a goal toward which donor interventions are necessarily addressed; and the project, therefore, should be addressed to reflect a more modest goal (Recommendation #11).

The four year interval for the IHAP project, as noted above, should nicely set the stage for actual increased production and hence overall economic growth. What is essential now, and will be for several years to come, will be to make certain that the institutionalization aspects of theproject are not dissipated and will continue to be strengthened. This can be achieved, as also suggested above, by further training of Ministry personnel and farmers and by putting more emphasis on private sector incentives (such as those recommended in the body of this evaluation

document); and probably by providing expertise in areas not touched by the present project but which nevertheless are critical in the total picture: processing, storage, marketing, transport and associated economic analysis.

RECOMMENDATION #12:

It is therefore recommended that planning be initiated as soon as possible, possibly utilizing some of the remaining funds in the present project, to address these issues, with a view to providing a sequel to the present endeavor, taking into account the central features of such a sequel would be: (1) more in-depth institutionalization and (2) more recurrent costs shifted to the individual grower and free market forces.

ATTACHMENT A

Interview List of Government Officials

Hon. Dr. Pupuke Robati - Deputy Prime Minister

Hon. Tangata Simeona - Minister of Agriculture

Hon. Papamama Pokino - Minister of Works and Minister of Marine Resources and Fisheries

Hon. Matepi Matepi - Deputy Minister of Agriculture

Mr. Kato Tama - Secretary of Agriculture

Mr. Apoo Tangatatutai - Senior Planner, Dept. of Development Planning

Mr. Bill Hosking - Director, Advisory Services, MOA

Mr. Edward Winnen - Development Economist, MOA

Mr. Andrew Nola - Citrus Development Officer, MOA

Mr. Kenneth S. Mills - Administrator, Cook Islands Disabled Persons Institute

Ms. Reiri - Dean, Economics Department, Tereora College

Dr. R.P. Woonton - Head Pathologist, Rarotonga Hospital

Dr. Sue Wooton - Head Technologist, Rarotonga Hospital

Mr. Ken Brown - Director of Water Supply, Ministry of Works

Mr. Teaneu Taripo - Chief Administrative Officer, Department of Water Supply, Ministry of Works

Mr. K. Mohadevan - Engine Mechanics Instructor, Ministry of Works

Mr. John Campbell - Chief, Agricultural Experimental Station, MOA

Mr. Tupuna Ngaoire - Chief Administrative Officer, Mauke

Mr. Teki Tetava Ariki - Chief Administrative Officer, Mitiaro

Mr. Rohea Tangatoa - Senior Clerk, Mitiaro

Mr. Upoko Simpson - Senior Agricultural Officer, Atiu

Mr. Teiotu Tangapoto - Chairman, Island Council, Atiu

Mr. Moetaua Boaza - Chief Administrative Officer, Atiu

ATTACHMENT B

LIST OF RECOMMENDATIONS

RECOMMENDATION

#1 --- That should this project be extended, consideration be given to charging growers a fee for land clearing and soil preparation, pestidicdes, fertilizers, etc. to be paid on a multi-year basis after certain trees begin to bear fruit.

#2 --- That a modest interest rate be charged by the revolving fund for copra drying facilities;

#3 --- That remaining IHAP moneys in the coffee production component be concentrated on training farmers in newly-managed coffee acreage and an older acreage on Atiu and the small holdings on Mangaia, Mauke and Mitiaro.

#4 --- That funds allocated to greenhouse construction be used to procure additional nursery equipment.

#5 --- That steps be taken as soon as possible to organize farmer training in speciality crops, in order to complete this aspect of the project by the terminal date.

#6 --- That unobligated consultancy funds be used to engage short-term experts in food preservation, livestock processing on poultry feed production.

#7 --- That the $3,000 earmarked for an agricultural radio program be used as in Recommendation #6.

RECOMMENDATION

#8 --- That prizes be converted from in-kind to cash.

#9 --- That IHAP as soon as possible fulfill its obligation of $8,171 to the project.

#10 --- That IHAP, as soon as possible, begin negotiations with the Cook Islands Government to implement Recommendations #2, #5 and #8, and, as necessary with AID.

#11 --- That hereafter the project should not be explained as having decelerated emigration as a purpose.

#12 --- That planning be initiated as soon as possible, possibly utilizing some of the remaining funds in the present project, to address the issues of institutionalization, recurrent costs and critical areas (processing, storage, marketing and transport) not covered by the present project.