Pacific Island Livestock Development

RALPH LOVE
PACIFIC ISLAND LIVESTOCK DEVELOPMENT

by

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CASE STUDIES IN PUBLIC POLICY IMPLEMENTATION
AND PROJECT MANAGEMENT

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ABSTRACT

This case study concerns livestock development project carried out in 1972-1975 in the small, independent country of Rabona in the South Pacific. This nation of many islands and relatively few people had remained basically traditional in its orientation, subsistence agricultural economy, land tenure system, and communal social relationships. An increasing desire for foreign imports placed a heavy burden on Rabonans, for the copra produced from coconuts for export was the only cash crop. The Rabonan Cabinet decided to give high priority to developing a local cattle industry to reduce Rabonan dependence on costly meat imports. Financial support and technical assistance were requested from New Zealand's aid program.

The N. Z. Ministry of Foreign Affairs approved the request, and delegated responsibility to plan and implement the project to the N. Z. Department of Agriculture. A retired Department field officer with livestock experience was asked to conduct a feasibility study in Rabona. He proposed a project with twenty-one task units, aimed chiefly at building up a beef breeding herd and expanding facilities at the Government's experimental farm. Subsequently he was appointed to manage the project.

Prior to this, the Agriculture Director in Rabona, a native of the islands, unofficially commissioned two former staffers to do an informal survey on the subject, before they left for Australia to continue their graduate studies in agriculture. The two men, also native Rabonans, approached their task with full attention to the constraints of local custom and local resources.

\(^{1}\)"Rabona" is a pseudonym for a real South Pacific country. For reasons relating to political and personal sensitivity, the names of specific places and individuals are disguised in this study. All other factual description is accurately represented.
and developed a plan which took this into account and heavily involved local farmers from the start. For private reasons, the Director did not forward this proposal to his Minister nor to New Zealand officials on the project. This was unfortunate for the scheme was soundly based on local realities and promised quicker results than the expatriate's plan.

The project, as conducted under expatriate direction, met numerous problems in implementation, including delays and cost overruns resulting mainly from the director's lack of professional management experience, his failure to correctly estimate the limitations of Pacific shipping schedules, a lack of skilled local workers, the leisurely pace of Rabonan administration, and his difficulty in working closely with Rabonan personnel because of their cultural differences. As a whole, the project failed to attain the goal of beef self-sufficiency, although some positive, short-term benefits did accrue from the separate task activities.

Of the problems encountered in the Rabona venture, many are common to development projects elsewhere in the Pacific. Project design and management control need to be flexible in response to the reality of local cultural and environmental constraints, and the lack of skilled manpower at all levels and the relative unfamiliarity with Western management practices have to be recognized by planners.
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SERIES PREFACE

The need for more effective project planning and management is emerging as a critical function in both public and private sectors in all countries. Vast resources are channeled into development projects, but the lack of viable policies coupled with poor management results in a waste of valuable resources—human, financial, and natural—in both highly industrialized and rural societies. Experience indicates that attempts to accelerate economic and social growth have often floundered due to serious problems with project planning and implementation. Experience further demonstrates that traditional (Western) project management training programs are too narrow and segmented, are not meeting needs, and often result in costly mistakes in the United States as well as in other countries. A review of educational and training programs of a number of universities in the United States and Asia as well as of international funding agencies demonstrates the fragmented nature of existing project management educational programs. There is pressing need to develop a new program which considers the entire project cycle as an integrated process.

Given this challenge, the Technology and Development Institute (TDI), with its unique East-West partnership relationships, has formulated plans for cooperative research to develop an innovative and comprehensive approach to project management education and training. The project focuses on serious (and costly) management difficulties in the United States and the nations of Asia and the Pacific in view of their common problems rooted in mutual concerns and resulting in similar consequences. The basic approach is to develop a new prototype curriculum for educating and training project managers to understand the entire project cycle as a basis for expediting the necessary decision-making to successfully implement development projects for any sector of the economy or society. It will also attempt to broaden the perspectives of international assistance policy-makers, national policy-makers, local planners, and project implementers in understanding the relationships between national goals and local project requirements. The curriculum will be founded on a balanced
combination of lectures, group discussions, seminars, management game exercises, and case study analyses, with sufficient flexibility to be adapted to the needs of training institutions in different national and cultural settings in Asia, the Pacific and the United States.

Basic to the curriculum is this series of case studies, covering agricultural, industrial, public works, and social sectors. These case studies were initiated early in the calendar year 1976. Participants from Korea, New Zealand, Philippines, Thailand, Taiwan, Malaysia, Indonesia, Iran, and the United States conducted the necessary field research as a basis for writing case study analyses of development projects in the context of an integrated project cycle. Each of the participants then came to the Institute to spend approximately one month to finalize the draft of his particular report. It is anticipated that between ten and fifteen case studies will be completed in this prototype series. The initial group includes such case studies as:

(1) Korean National Family Planning Program,
(2) Bangkok Metropolitan Immediate Water Improvement Program,
(3) Laguna Rural Social Development Project (Philippines),
(4) Pacific Islands Livestock Development, and
(5) Community Development Project (Hawaii).

The case studies will be used extensively as a learning tool to provide relevance, practicability, and reality to both classroom discussions and the follow-up field practicum.

Case study research has been in widespread use throughout the world for many years in medical and law schools. This method of instruction has become increasingly popular in recent years in schools of business and public administration, followed more recently by schools of engineering. However, the Institute's case study approach is innovative in that it represents the first attempt to write a series of case studies based on a shared conceptualization of the project cycle as an integrated process. Carefully documented and readable case studies comprehending the entire project cycle will
prove to be extremely useful learning devices in both training and formal education programs. Each case study in this series has been developed in accordance with guidelines prepared by Dr. Dennis A. Rondinelli, (Director, Urban and Regional Planning Program, Maxwell School, Syracuse University) during his tenure as Senior Fellow at the East-West Center in 1975-76. Dr. Rondinelli's paper, "Preparing and Analyzing Case Studies in Development Project Management," is included in the series for this reason. It is necessary to note that all projects do not necessarily evolve through an identical sequence of stages in the project cycle. Rondinelli stressed this important point, and each author has been allowed flexibility in his overview of a project's history within the scope of the idealized project cycle.

This case study series is an appropriate example of the Institute's attempt to achieve the Center's goals of better relations and understanding on economic and social development problems of mutual concern to all countries, East and West, through cooperative research, study, and training activities. In this context, special thanks are conveyed to the authors of the case studies, and to their respective institutions for the splendid cooperation received. Particular acknowledgement is due to former Senior Fellow Dennis Rondinelli for his contribution in formulating the guidelines for the case writers. Acknowledgement is also due Senior Fellow Leonard Mason for his untiring efforts in final editing.

Louis J. Goodman
Acting Director,
East-West Technology
and Development
Institute
INTRODUCTION

Rabona, a South Pacific Community

Rabona is an independent island nation in the southern tropics. It is made up of many small islands with a total land area of several hundred square miles. Many of the islands are uninhabited. The largest is Rabona Island which supports the greatest concentration of the country's population of a little over 100,000. Rabona has been independent since the 1960's. It has a parliamentary system of government with a Prime Minister as the head of state.

Subsistence cultivation is the basis of economic life. There are such planted crops as coconuts, yams, taro, bananas, corn, and melons, as well as several other crops planted on a three-year rotation cycle. Returns from this agricultural activity are satisfactory because of the fertile soils. Little attempt has been made to develop export crops even though countries and territories close by are unable to produce sufficient food crops for their own needs.

Land tenure practices are complex and are based on a traditional structure whereby the land is collectively owned by village groups. Private ownership of land is not possible. Members of each village group are able to cultivate sections of the land only with the agreement of elders whose authority is sanctioned by tradition. The Rabonan Government, however, does hold some state-owned land.

1For reasons relating to political and personal sensitivity, the names of specific places and individuals are disguised in this case study. All other factual description is accurately represented.
The people of Rabona have retained a very strong affection for their ancestral soil, an association which extends far beyond its immediate productive value as a source of food. The land where the ancestors once lived and now lie buried is an object of the deepest feeling. This affection for the land is expressed in a number of ways and can be likened to a religious or spiritual attachment.

In 1965-1970 and again in 1970-1975, development plans were formulated by the Government with particular attention to the replanting of coconut trees for rehabilitating the islands' copra industry, and also to the production of certain food crops with the objective of achieving a modest export trade. When Rabona's balance of payments reached a critical point in 1970, the Government decided that everything possible should be done to encourage production of local substitutes to reduce the flow of imports.

### Need for Livestock Development

One problem facing the country was the high cost of imported meat. Imports accounted for approximately 30 percent of Rabona's total meat consumption. It was highly desirable to reduce such large-scale reliance on meat imports as rapidly as possible. The continuing rise of prices for meat products related to the increase in freight charges prompted a Special Committee which was established by the Prime Minister to investigate ways of decreasing import expenditures, to strongly recommend an increase in local livestock production as a substitute for meat importation.

The Rabonan Department of Agriculture estimated that between 7,000 and 8,000 cattle were already in the country, but few of these were managed in large herds. Most of the animals belonged to small landholders who kept only a few cows and had little or no experience in farm management. Outside observers had noted, however, that cattle did particularly well in Rabona. Existing deficiencies in this area were largely due to inbreeding and mismanagement rather than to any problem associated with the local climate or land ecology.
Since achieving independence, the Rabonan Government had pursued a policy of localization (indigenization) of employment. Recently, with vigorous enforcement of this policy, expatriates from New Zealand and other non-citizens of Rabona were employed only where a qualified local person could not be found to undertake a particular job. This provision applied to hiring in government departments and also in private organizations. A non-citizen could be employed for only two years, and during that time he was required to train a local counterpart who could take over his job at the end of his contract.

The primary stimulus for the idea to establish a livestock project came from deliberations in 1971 by the Special Committee mentioned above. The structure of agricultural development in Rabona was such that it was entirely possible to increase local meat production. Existing problems of land tenure and operating capital meant only that the project would have to be undertaken by a Government agency rather than by a private corporation or private citizens.

The decisions of the Special Committee as to where projects for import substitution could be introduced were based upon analysis of the country's historic dependence on imports. The Committee itself was made up of officials from the Planning Department, none of whom had any direct responsibility or experience in the agricultural sector. The Department of Agriculture, for its part, was mainly concerned with the development of copra and pineapple plantations and with crops cultivated by growers who were producing on a small scale.

The Special Committee's recommendation for a project directed toward increasing local meat production was accepted by the Cabinet. The Minister of Agriculture was asked to determine the means by which such a project could be implemented. The Honorable T. H. Rangi, who held that responsibility, sent a memorandum to the Director of Agriculture, Harvey Enoka, requesting him to "prepare a proposal to increase meat production through a livestock development scheme."
The major factor influencing the setting up of the project was the anticipation of economic benefits it would bring by reducing the amount of meat imported by Rabonans. Initially, social benefits were not considered, such as might accrue from land development, increased employment, and better health standards. However, these became important elements in the overall planning as the project was formulated.

The need for and identification of a livestock development scheme, therefore, was a decision made primarily on economic grounds. The project was seen as a means of assisting in the solution of a vital economic problem. The Department of Agriculture became involved in the matter only after that decision had been made. Although officers of the Department possessed technical knowledge in the general field of agriculture, they were not invited to judge the feasibility or rationality of the projected idea. Once the decision had been made by the Special Committee, the single role of the Agriculture Department as expert in its area of responsibility was to advise and assist in implementation.

Officers of the Department, however, lacked experience in livestock production on the scale envisaged, and had no first-hand knowledge of operations of this type nor of the technical skills and backup services required. The overall objective of the scheme, while readily accepted by the Government leadership, was quietly opposed by some Ministry officials on the grounds that the livestock industry was one in which the Department had virtually no experience. Moreover, the problems associated with acquiring rights to land and obtaining cooperation from landowners, in order to make the scheme viable in the long term, were issues that greatly concerned the Department.

The primary task for Agriculture officials now became that of developing a proposal to implement the operation mandated by the Government. Director of Agriculture Harvey Enoka, although not convinced that livestock development in Rabona was either feasible or desirable, was of the opinion that if the Cabinet maintained its position some outside assistance must be sought to investigate the prospects of such a
scheme and to prepare an implementation plan. Reluctantly, he recommended to his Minister that a request be made to the New Zealand Government to provide experts who could assist the Department with the proposed development. The Minister of Agriculture, recognizing the Department's lack of experience in this field, readily agreed to his Director's suggestion and said he would recommend this action to the Rabonan Cabinet.
CHAPTER I

FORMULATION OF THE PROJECT

Rabonan Initiative for Action

On August 22, 1971, the Rabonan Cabinet resolved that the livestock development program it had already mandated should be handled as a priority matter, considering the urgent necessity to make the country more self-sufficient in meat production. The Cabinet also agreed to the Minister of Agriculture's suggestion that outside experts be asked to assist with the project. The Honorable T. H. Rangi, as Minister, was given authority to take whatever measures were necessary to implement the Cabinet's decisions.

On August 25, the Minister met with his Director of Agriculture, Harvey Enoka, and told him of the two decisions reached by the Cabinet. The Minister said that the Cabinet regarded the scheme as most important because it would not only provide a reduction in the expenditure of funds overseas but it would also increase employment opportunities for the people in Rabona.

Director Enoka, still full of doubts, anticipated that the decision to undertake a new livestock program without adequately trained local personnel would create some problems. He also thought that the resources allocated to develop such a scheme would far better be utilized to stimulate production of copra, bananas, and other crops for which overseas markets could provide needed income for Rabonans. Because the people of Rabona were traditionally familiar with and experienced in crop production, he believed that expansion in that area was more advisable than initiating a new livestock program without understanding the problems and pitfalls involved.

The Minister was not unsympathetic with the points raised by Enoka but he told the latter that the Cabinet decision to proceed with the livestock scheme had been
FIGURE I
BAROMA GOVERNMENT STRUCTURE AS RELATED TO THE
BAROMAN LIVESTOCK DEVELOPMENT PROJECT

Cabinet

Political

Minister of
Agriculture
(T.R. Rangi)

Prime
Minister's
Department

Minister
of
Foreign Affairs

Permanent
Officers

Director of
Agriculture
(Harvey Ewoka)

Central
Planning
Office

Secretary
of
Foreign Affairs

Aust. Director
of Agriculture
(Vacant)

Graduate Students
(Boger Matella
Ariki Talua)

Veterinary
Officer
(Kenneth Pearsall)

Regional Director
for Crop Production
(Meke Tana)

Experimental
Farm
unanimous. After hours of discussion, the two officials finally agreed that the New Zealand Government should be approached about the possibility of utilizing that country's overseas aid funds to assist with the scheme in providing the expertise required for planning.

Following their meeting, Enoka checked with the Rabonan Ministry of Foreign Affairs and found that the overseas aid grant from New Zealand was not yet fully committed. There was approximately NZ$300,000 that could still be allocated to new projects. He therefore submitted a report to his Minister advising that funds were available and suggested that permission be obtained from the Cabinet to ask the New Zealand Government to allocate, from the unexpended funds, on a priority basis, whatever amount might be required for the livestock development scheme. The Cabinet's Executive Committee, which was empowered to make such decisions, agreed to this proposal and the Agriculture Minister advised Enoka that he should proceed with whatever action was necessary for approaching the New Zealand Government on the matter.

On September 15, 1971, Enoka wrote to the N. Z. High Commissioner in Rabona informing him of the Cabinet's decision and asking that part of the overseas aid allocation be used to support the project to increase livestock production within the country with the ultimate objective of making Rabona self-sufficient in its meat supply. He further requested that an expert from New Zealand be sent to Rabona to look into the possibilities for implementing such a scheme. The Rabonan Central Planning Office on the same date formally submitted an identical request to the New Zealand Government, specifically to the External Aid Division in the Ministry of Foreign Affairs.

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1 On December 20, 1971, after the exchange rate had floated for several months, a new exchange rate of 0.82237 New Zealand dollars per United States dollar (1 NZ$ = 121.6 US cents) was introduced.
FIGURE 2
N. Z. GOVERNMENT STRUCTURE AS RELATED TO THE
RABONA LIVESTOCK DEVELOPMENT PROJECT

Cabinet

--

Government Caucus

Cabinet Subcommittee on Foreign Aid

Minister of Agriculture & Fisheries

Minister of Finance

Secretary of Foreign Affairs

Director of Agriculture

Secretary of Treasury

Purchasing Officer

Field Advisory Officer (John Robinson)

Chief Advisory Officer (Farms) (Davitt Anderson)

Administration Officer

New Zealand High Commissioner in Rabona

Director of External Aid Division

Pacific Regional Director for Foreign Aid (Harold Nisimbe)

Officer in Charge of Rabona Foreign Aid Program (Michael Ronetti)
Overseas Aid from New Zealand

The Rabonan application to the New Zealand Government under the latter's development assistance program had to pass through several stages of review in New Zealand. Responsibility for overall coordination and execution of this program, as suggested above, rested with the Ministry of Foreign Affairs and its External Aid Division (EAD) which reviewed overseas applications for aid.

Foreign assistance policy was formulated by the New Zealand Government Caucus and was watched over by a Cabinet Subcommittee on Aid. Formal requests for bilateral assistance were forwarded to EAD in the Ministry of Foreign Affairs and checked for consistency with the aid policy. Planning was normally done for a three-year period and included major elements of the bilateral programs and all multilateral contributions. Ministry officials each year prepared a more detailed outline of foreign aid. In this context, the Rabona Foreign Aid Program for 1971 was budgeted overall for NZ$1,500,000. Each specific project that drew upon funds from this program had to be approved by both the Ministry of Foreign Affairs and the Cabinet.

The normal procedure for supervision of overseas aid programs called for them to be looked after by officers of the New Zealand diplomatic mission to the country concerned. Where it was necessary, experts would be recruited from New Zealand government departments and universities, or as private consultants. In the South Pacific, small aid programs were administered directly by specialist departments in the New Zealand Government. In the present case, this would be the Department of Agriculture. EAD was responsible for recruiting and briefing the experts or consultants.

The Rabona livestock project would fall within the jurisdiction of the EAD officer in charge of the Rabona Foreign Aid Program, Michael Bennett. He had been with the Division for four years, having joined it after obtaining an honors degree in Economics from a New Zealand university. He possessed little overseas experience, having served only in Australia for six
months. His responsibility was to the Pacific Regional Director for Foreign Aid, a post then held by Harold Newcombe. All Regional Directors answered to the head of EAD.

The Rabonan application for assistance in livestock development was reviewed by EAD officer Bennett to determine (1) if the proposal could be supported within the budget allocation for Rabona and (2) if it fell within one of the general sectors that New Zealand had agreed to assist. After checking, Bennett reported to Pacific Regional Director Newcombe that the project met both criteria. He also noted that the Rabonan Cabinet had clearly identified this as a priority project. Accepting Bennett's evaluation, Newcombe reported these findings to the Director of EAD, adding that since the Rabonan Cabinet considered this to be a priority matter the New Zealand Government should proceed immediately with recruitment of an expert to be sent to Rabona.

On October 21, the Director of EAD wrote to the N. Z. High Commissioner in Rabona advising him that the Government was prepared to appraise the feasibility of a livestock development project in Rabona. He suggested that the High Commissioner inform the Rabonan Government that an expert would probably be available early in 1972 to make the necessary study. On the same date, the Director of EAD sent a letter to the N. Z. Ministry of Agriculture and Fisheries requesting that a suitable person be recruited to "undertake an appraisal of livestock development in Rabona with a view to assisting the country in its aim, to become self-sufficient in meat products within the foreseeable future."

Copies of this correspondence were sent to Pacific Regional Director Newcombe and to Michael Bennett. The EAD Director noted on Bennett's copy that he should follow up with the N. Z. Ministry of Agriculture and Fisheries if nothing was heard within three weeks. On November 2, the Director of EAD was informed that none of the Agriculture Department's officers could be released in early 1972. However, a recommendation was included that a suitable person for the job would be John Robinson, who was retiring as a Field Advisory Officer after forty years with the Department. Further-
more, the Department would be prepared to give Robinson any support in the form of technical advice which might be required in carrying out the assignment. Robinson had wide experience in all categories of farming. During his early years with the Department he had also farmed on his own property. Although quite familiar with New Zealand conditions, he never had been concerned with projects outside New Zealand and he had no experience whatever in tropical agriculture.

The Director of EAD passed this information on to Newcombe and Bennett with a note to the latter suggesting that "he contact John Robinson and bring him in for a chat." Bennett wrote to Robinson referring to the recommendation made by the Agriculture Director and asking him to come in for discussion of the proposed project. Robinson had already been briefed on the matter by the Agriculture people, and he agreed to meet with Bennett and the other Foreign Affairs officials on December 15. Bennett notified Newcombe and the EAD Director that Robinson was interested in discussing the Rabona Project with them, and asked if they could join the meeting. Unfortunately, both men had to be away on that date, but Newcombe told Bennett to brief Robinson and to have him fill out the necessary papers should he be willing to take on the assignment.

The December meeting between Bennett and Robinson was fairly brief. Bennett outlined the nature of the Rabona request. He gave Robinson some general background information about Rabona, and also wrote down the details of the agricultural officer's experience with livestock development. The latter was quite keen to undertake the assignment as he had never before had the opportunity of visiting the South Pacific islands. He felt that in his retirement he would be in a good position to devote some of his time to the proposed task. Bennett was impressed with Robinson's experience and knowledge of the livestock industry, and was convinced that the expert could easily handle the exploratory study, with support from the Agriculture Department if necessary. The two men agreed that the investigation should take place as soon as possible in 1972. Meanwhile, Robinson was to prepare a proposal with estimates of the time he would require to research the possibilities
for livestock development and the cost estimates for completing that job.

Early in 1972, John Robinson wrote to Bennett advising him that it would take about two weeks to complete the study of Rabona's livestock potential and that he was prepared to do the work in February. The cost of the survey, apart from a consultant fee, would include travel fares and living expenses at fifty dollars a day. Bennett advised his superior, Pacific Regional Director Newcombe, that a time schedule and costs had been set and were in order. He requested approval for the study to be carried out. Newcombe agreed and sent a memorandum to the Director of EAD relating the progress achieved to date. This information was forwarded to the N. Z. Minister of Foreign Affairs in a routine weekly report from the External Aid Division (EAD).

John Robinson, since retirement, had kept fairly busy reorganizing his personal affairs and actually did not have a great deal of time to undertake extensive research on Rabona before going there. He had read the brief background documents supplied by the Ministry of Foreign Affairs and was confident that his prior experience with livestock management in New Zealand would be sufficient preparation. From his former colleagues in the Agriculture Department who had been to Rabona he learned more about the general nature of the country and local attitudes about livestock development. However, he really gained very little from these talks except to hear about the difficulties his colleagues had experienced in communicating with Rabonans and understanding their land tenure system.

Full details on the proposed study dates and John Robinson's background were sent to the N. Z. High Commissioner in Rabona, who in turn notified the Rabonan Director of Agriculture, Harvey Enoka. The latter informed the Rabonan Minister of Agriculture about the progress that was being made.

Bennett was anxious to have Robinson conduct a very comprehensive review of Rabonan "livestock improvement in general." In his final briefing of Robinson, he emphasized the need to build "a sound general base" for
conclusions drawn in his report. Bennett's enthusiasm for the prospect of livestock development in Rabona had prompted his superior, Harold Newcombe, to give him a free hand in overseeing the project.

It was formally agreed by Robinson and the Foreign Affairs officials that he would conduct the feasibility study during the last two weeks of February 1972. He was advised of his contact at the N. Z. High Commissioner's Office in Rabona, and was given more background papers on Rabonan social, cultural, and land tenure matters.
It was noted in the previous chapter that Harvey Enoka, Director of Agriculture in Rabona, was skeptical about the Cabinet proposal to diversify into livestock production. He considered it far more prudent to develop local resources with which Rabonans already had training and expertise. However, in late November 1971, he decided independently to make use of the services of two graduate students to prepare a proposal on livestock development. The students, both of them native Rabonans, had just completed a field study with the Department two months ahead of schedule and had some weeks before leaving for their university studies in Australia. Both had worked for the Department for three years prior to being granted a year's study leave to obtain postgraduate degrees in Agricultural Science in Australia. Roger Matella and Ariki Talua had earned their Bachelor's degrees in Agriculture in New Zealand, and as undergraduates had received a sound theoretical and practical training in cattle and dairy farming.

The project undertaken by the two men was personally supervised by Director Enoka, and they reported directly and only to him on an informal basis as temporary departmental officers. He gave them wide latitude in preparing a proposal for a livestock production scheme intended to reduce the high rate of meat imports into the country.

The student researchers decided at the start that the problem must be approached from a local point of view. Both were well aware that heretofore the major restriction on land development schemes of any kind in Rabona had been the complex nature of the traditional land tenure system. As described in the Introduction, land was collectively owned by the members of village groups. Existing coconut plantations were in effect owned by the whole group as a corporate collectivity, even though the individual trees might belong to or be
used by certain member families. Such customs were
strictly adhered to by all Rabonans. Under this
system, it was essential that development of land
on a scale larger than that of a family garden plot
should be approved by the entire group owning the land.
This normally involved a long and detailed discussion
with a large number of landholders as to the terms
they would agree to for use of the land in question.

Matella and Talua realized that their first consi-
deration was to determine the willingness of the people
to participate in a major scheme that would require
the cooperation of many landholders. The initial approach,
they believed, should be to those Rabonans who held land
in areas judged to be most suitable for grazing cattle.
Most of the accessible land in this category was already
devoted to coconut plantation use. This meant that a
need existed to develop a program of cattle grazing
under the coconut palms. The trees were normally
spaced several yards apart amidst the understory vege-
tation and grew to a considerable height above the
browse level. The student investigators would have to
determine whether cattle could be grazed successfully
under these conditions and achieve acceptable weight
gains in the process. With their intimate knowledge of
local conditions, they felt that one advantage of grazing
"cattle under coconuts" was that the shade under the
trees provided a more tolerable environment for cattle
than did open pasture. An equally important considera-
tion, at least during the initial phase of the scheme,
was that if the cattle were restricted to utilizing the
existing vegetation under the trees there would be no
urgency in planning pasture improvement.

Matella and Talua guessed that it might not be
possible to assess the feasibility of this form of
grazing in purely economic terms. It would take some
time before one could determine whether the weight gains
of cattle would be acceptable in relation to the capital
invested. The costs of management in a tropical country
would be strongly influenced by the different grazing
conditions and stocking rates as compared with New
Zealand. However, whether the net result was positive
or negative, it must be judged against the value of
reducing the amount of imported beef and the consequent savings of local funds that would otherwise be expended overseas. There were also the social gains to the nation implicit in an increased beef herd, relative to employment opportunities and cash returns for landholders cooperating in the scheme. Overall, it was believed that the livestock development plan would create little social disruption and would not diminish copra revenues from the coconut plantations.

Discussions held by the two students with various Rabonan landholders proved to be quite successful. They obtained full cooperation as well as a firm offer by one village to make available two 400-hectare areas of land relatively close to each other and providing a good range of coconut tree age-classes. One of these areas, which could be utilized for an experimental grazing project, possessed a topography varying from steep to gently rolling hills, with some bare earth and rocky outcrops. The land was adequately provided with a number of wells and permanent streams of good quality water. Soils were reasonably fertile. The existing vegetation growing in symbiotic association with the trees of the coconut plantations could be grouped into several classes, i.e., either mission grass or bracken and other low weeds in the drier areas, reeds in the moister locations, and residual broadleaf forest in the valley bottoms along stream edges. It was likely to be uneconomical to try improving the pasturage with fertilizers as the results would be only marginal. The other of the two land areas was much the same except for minor differences in vegetative cover and soil qualities.

General Recommendations

Matella and Talua, in submitting their final report to Director Enoka, concluded that at least initially the Government should undertake an experimental program to explore the possibility of grazing "cattle under coconuts" in support of the national mandate to reduce meat imports by increasing local beef production. First, they argued,
it would take some time to build up an organization and sufficient cattle stock to operate on a larger scale in Rabona. Thus, the urgent need was for a pilot project which, if successful, could serve as the nucleus for later expansion. The trial project could be conducted on the two 400-hectare land areas offered by Rabonans, which were generally representative of the principal soil types and coconut tree age-classes in the country.

They acknowledged that a calculated risk existed in setting up such a trial project, because it would involve large expenditures for the initial investment in cattle herds and living accommodations for new staff. However, if the trial should prove impracticable, the cattle might be disposed of locally at little or no loss to the Government, and the accommodations could be turned over to Rabonans who needed housing. Overall, it was considered that the degree of risk was minimal and acceptable, considering the Government's sense of urgency about this undertaking.

The major problem facing large-scale livestock development in Rabona, as they saw it, was the lack of sufficient expert knowledge for conducting the required experimentation. While unskilled labor was readily obtainable, individuals with some experience in cattle and farm management were very scarce. There was virtually no one in the local community with a thorough understanding of this type of farming.

Briefly stated, the principal recommendations submitted by Matella and Talua to Director Enoka were as follows:

(a) that a pilot cattle-grazing project be established in the area as soon as possible,
(b) that a cattle manager be recruited to set up and operate a special cattle unit within the Department of Agriculture for a four-year trial period,
(c) that there be superimposed on the grazing experiment a number of tests designed to provide more precise information on which to base future plans for expansion, and
(d) that housing and other domestic requirements, as well as stores for the first year of the project, be ordered and acquired before the cattle manager was appointed.

The last recommendation was included as a necessary pre-condition to recruiting a manager of sufficiently high caliber to supervise the development scheme and to ensure that training of local people was carried out in the best possible manner. Thus, proper advance attention to the domestic accommodations for the manager and his family should guarantee that the new man would be able to spend his available time to the best advantage of the project.

The kind of livestock specialist best suited to the present situation, in the opinion of Matella and Talua, was a person who possessed the practical skills and capabilities of hill-country cattle farming and also experience with livestock in the tropics. He should have an innovative approach to the task and a sensitive appreciation for the cultural and social needs and values of the people of Rabona. Preferably he would be an active younger man, with a cooperative attitude particularly in the management aspects of such a project and the training of local farmers. It was essential that he be willing and able to work with Rabonan stockmen and to pass his knowledge on to them. He would also be required to select local Rabonans having the basic qualifications to enable them with training and experience to eventually play significant managerial roles in the program.

To bring in an expatriate cattle manager, probably from New Zealand, would require that domestic arrangements include provision for schooling as well as housing. The initial appointment should be for a two-year term with an extension of two years if desirable. It was felt by the two investigators that whoever was appointed as cattle manager should maintain residence in Rabona throughout the initial period of the development scheme.

The experimental livestock development project, as proposed by Matella and Talua, would be oriented toward achieving the following benefits:
(a) to provide experience in the large-scale management of "cattle under coconuts" in a manner that would not interfere with copra production on the plantations;

(b) to allow the buildup of breeding herds;

(c) to enable the development of technologies relating to:
   (1) optimum grazing intensity, with reference to soil types, terrain, existing vegetation, and possible erosion,
   (2) optimum paddock size and design,
   (3) animal management practices, e.g., rotational grazing pattern,
   (4) management organization,
   (5) overall economics of the project, and
   (6) pasture improvement;

(d) to advance as quickly as possible to a suitable situation permitting general expansion rapidly if the scheme proved practicable; and

(e) to provide information useful for further development of pasture farming.

Expanding on the above recommendations, Mata and Talua provided further details and points for Director Enoka's consideration. In regard to administration, they pointed out that present staff members of the Department of Agriculture were already fully occupied with their normal duties. None of the field staff had adequate training in livestock management. Therefore, the recommended cattle unit, intended to operate separately and with direct responsibility to the Agriculture Director, would need a cattle manager, two stockmen, and casual labor on demand. The number of stockmen would be increased as the trial progressed. Clerical and logistical servicing would be carried out by existing Departmental personnel.

In the plantation areas where no pasture improvement was planned, cattle would be raised until the age of two or two-and-a-half years, when they would be ready for final fattening on high quality pasture. Cattle of this quality were already in demand and no difficulty was anticipated in finding a market for them. Because
there was a national shortage of good quality breeding cows, it was recommended that 100 of these and two bulls be acquired from overseas to provide the nucleus of a breeding herd. Additional yearlings could be obtained from local farmers wherever available to make up the balance of the projected herd when fencing had been completed. Local Santa Gertrudis and Brahmin cross-bred cattle were well suited to the Rahonan conditions of rough grazing; temperate-zone beef breeds, such as Herefords, would be useful primarily to expand the herd by breeding back to the locally adapted animal.

The development scheme would have to give careful attention to problems of cattle disease and animal health in general. Only a limited veterinary service was available, but every effort should be made to insure against an outbreak of disease during the trial period.

In regard to pasture management, the aim would be to build the paddocks as large as possible, consistent with complete coverage by the cattle and without risk of erosion or deterioration of pasture grasses. As already indicated, the existing vegetation under the coconut trees would be utilized initially. Paddock size under these conditions might be set at twenty hectares to start with. Optimum size could be ascertained only after experimentation. Topography, water supply, herd control, and plantation management would also be governing factors.

The trial area would have to be large enough to fully cover the range of coconut tree age-classes, understory vegetation types, and soil types, and to allow a comprehensive appreciation of management and administrative requirements. The size of the area should be economically consistent with the size and time available of the minimum staff provided. Costing and staffing for the trial project was estimated on the basis of the two 400-hectare areas of land available, and could be scaled up or down as experience and funding dictated. A schedule of costs was prepared for the project that would begin with only 200 hectares under grazing management and would build up each year over a four-year period to the 800 hectares projected for the trial. Costs for each year were estimated for
personnel, housing, transport, cattle stock, paddock and stockyard construction, and veterinary services. The first year's projected outlay would amount to approximately NZ$50,000, which together with increments of about NZ$30,000 for each of the following three years would round off to NZ$145,000 as the total project cost.

The livestock development proposal and recommendations were presented by Matella and Talua to Agriculture Director Enoka, prior to their departure to continue their studies overseas. Director Enoka was impressed with the thought which had gone into the report, and he spent several hours discussing the proposal with Matella and Talua. Their inquiries and understanding of the local situation had resulted in a report which in his opinion was eminently feasible in its attention to the land tenure problem. He considered the total cost estimate of NZ$145,000 to be quite realistic. It was encouraging to him to see the quality of the work produced by the two graduate students, and he believed they would make a very significant contribution to their country when they returned to Rabona in twelve months' time.

Because the investigation had been made in an unofficial capacity, the authors had prepared only four copies of the report. They gave two to Director Enoka and kept the others for themselves. Enoka foresaw a major political problem in that the recommendations made it clear that the Cabinet's mandate to effect a high level of meat production was not going to be achieved for some years. Enoka was certain that the Minister of Agriculture would not like to be told of such a conclusion. The scheme put forward by Matella and Talua was frankly an experiment intended to test the feasibility of the Cabinet's objective. It did not propose a major effort toward immediate development of a national beef production program. For that reason, Director Enoka did not forward the report to his Minister, but waited instead for a reply to the Cabinet's request to bring in a livestock specialist from New Zealand to undertake a feasibility study with overseas grant aid available to the Rabonan Government.
Early in 1972, the Rabonan Director of Agriculture, Harvey Enoka, took six months' leave in order to attend an international conference in Asia and to visit various agricultural projects in Europe and North America. He turned over all of the immediate problems of his office to his Veterinary Officer, expatriate Kenneth Pearsall, who had been loaned to the Department by the British Government for a term of two years. At this time the post of Assistant Director of Agriculture was unoccupied, because Director Enoka had decided to leave it vacant until a suitably qualified Rabonan could be identified. In fact, he felt that Roger Matella, one of the two authors of the livestock report described in Chapter II, would be quite capable of assuming that responsibility when he completed his graduate studies in Australia.

Kenneth Pearsall had arrived in Rabona only six months earlier. However, he had acquired considerable experience in fourteen years of service with the British Government in Africa, and was well acquainted with the problems of livestock management in developing countries. He tended to be a bit aloof, it was said, and he still did not understand the cultural and social values of the people of Rabona. But so far he had proved to be efficient and competent in his work in the Department. Director Enoka had every confidence in Pearsall's ability to carry on the day-to-day tasks as Acting Director and to handle any problem that might arise in his absence. It should be noted here that Pearsall had not been told about the proposal for a livestock development scheme prepared by Matella and Talua a short time before. Enoka viewed the report as an unofficial study and saw no reason to share it with Pearsall before going on leave.

Shortly after Enoka departed on his journey overseas, the New Zealand High Commissioner in Rabona contacted
the Department with notice of the impending arrival of John Robinson, the livestock expert who had been appointed by the N. Z. Government to study the feasibility of a development scheme in Rabona. Pearsall, as Acting Director of Agriculture, was only partially acquainted with details of this plan. Upon checking the Department’s files, he learned more about the Rabonan Cabinet's decision, the earlier correspondence with the High Commissioner, and further information about John Robinson's background.

In the brief time that Pearsall had been stationed in Rabona, he had found only a small expatriate community and but few agriculture experts. Nevertheless, he had settled into the new life very well, and enjoyed being once again in an environment similar to that he had known in Africa. He welcomed the opportunity to work in a warm climate and in a situation where he was given far more responsibility than in the large, specialized departments he had been assigned to in England after his return from Africa. But it must be admitted that he was looking forward to Robinson's visit. He wanted to talk with the expert about the agricultural scene in New Zealand which he had not had opportunity to view at first hand.

Meanwhile, in New Zealand in mid-January, John Robinson received a final briefing from Michael Bennett, the External Aid Division (EAD) officer in charge of the Rabona Foreign Aid Program in the Ministry of Foreign Affairs. Bennett indicated to him that the Government was ready to cooperate with financial aid for the Rabonan livestock scheme, subject to Robinson's recommendation justifying the expenditure. He gave Robinson a letter of introduction to the N. Z. High Commissioner in Rabona and the necessary travel documents.

Robinson arrived in Rabona during the third week of February 1972. He was met by Acting Director of Agriculture Pearsall, and the next day was introduced to the Minister of Agriculture, the Honorable T. H. Rangi. This meeting had a great impact on the New Zealand expert. Minister Rangi was most anxious to impress Robinson with the importance of the proposed livestock development scheme as far as the Government
was concerned. He made it clear that the sooner meat production was increased the better it would be for the country. He acknowledged that Rabona had little expertise in this area and lacked the financial resources to undertake the venture alone. He told Robinson that all facilities of the Agriculture Department were at his disposal and that any assistance he required would be provided through the Acting Director's office.

A tour of the Department's agricultural facility was arranged by Pearsall, who also accompanied the New Zealander on field visits to other parts of Rabona. The new experiences associated with this introduction to the Rabonan way of life greatly interested Robinson. He saw many areas where existing livestock practices could be improved.

Another member of the visitation group was Mete Tana, Regional Director for Crop Production, a native Rabonan who had completed a Diploma in Agriculture in Australia. Tana was highly regarded within the Government, for he had demonstrated a sound understanding of the impact of Rabonan land tenure practices and social customs on agricultural development. He took the opportunity whenever possible to apprise Robinson of the problems likely to emerge in the Government's effort to increase livestock production. Paramount among these were the acquisition of land and the need to cooperate with local landholding groups to ensure that they fully understood the potential benefits of the livestock development scheme. Mete Tana wanted to spend more time with Robinson to discuss local problems regarding livestock management. But apart from chance conversations during their visits to farm areas under consideration for future development, he was not able to elaborate on his ideas.

John Robinson spent a little over two weeks in Rabona. He briefly visited one other island in the archipelago, but otherwise limited his investigation to Rabona Island, the largest of the group and the most populated. He had occasion to speak with several Rabonans who farmed on a small scale and who already owned a few head of cattle each. These animals were grown primarily for family requirements, although some
beef was produced for sale on the island. The New Zealander was shocked at the unsanitary methods employed locally for slaughtering cattle and for cutting up meat to be sold.

During the period of Robinson's visit, Kenneth Pearsall devoted nearly all of his time to assisting the livestock expert. An officer in the Department had been assigned to obtain copies of reports and statistics required by Robinson. However, only little had been written about livestock development in Rabona, and Robinson concluded that he would have to depend pretty much on his own observations for the recommendations he intended to make.

Robinson relied heavily on Pearsall's opinions. While this was reasonable in regard to technical matters, it overlooked important needs and wants of Rabonans. Neither Pearsall nor Robinson recognized the depth of the problems relating to land tenure, custom, or the need to establish ready and complete communication with Rabonans about what was being contemplated in livestock production. They did not see, as Matella and Talua had, that any major livestock venture in Rabona would probably have to be based on the principle of grazing cattle under the trees on the coconut plantations. No other suitable land was available.

John Robinson prepared his final report after his return to New Zealand, basing it on notes made in Rabona. He had interviewed the Rabonan Minister of Agriculture on three occasions, two other Cabinet ministers, four experts in the Agriculture Department, and six Rabonan landowners. He had visited twenty-one local farms and the Department's experimental farm. Also, he had looked into Rabona's slaughtering facilities, the Government's beef subsidy and disease eradication schemes, and the island's poultry and pig production.

Robinson's report was submitted to Michael Bennett at the Ministry of Foreign Affairs on March 22, 1972. It briefly outlined the method of investigation and described the existing programs for cattle improvement.

As already noted, Robinson was impressed with the technical knowledge of Acting Director of Agriculture Pearsall. He adopted the latter's suggestion that the
best way to obtain quick results was to give top priority to expansion of the 300-acre (121.5 hectares) experimental farm operated by the Department. By utilizing these facilities, it was argued, a well planned and organized beef ranch, for demonstration of pasture and cattle management with good quality breeding stock, could form the nucleus or base for later developmental schemes. To build on what already existed would be quicker than starting a new scheme from nothing.

The recommendations presented by Robinson were primarily concerned with this basic idea. Altogether, some twenty-two separate tasks were outlined for implementation within the overall project for a total cost of NZ$207,500 covering a three-year period (1972-1975).

Figure 3 identifies these tasks and notes their estimated cost. The following paragraphs (keyed by number to the listing in Figure 3) briefly describe the tasks that would be directly concerned with development of the cattle industry. Also included are several proposed tasks that deal with improvement of Rabona's pig and poultry production, but these will not be elaborated here, as the focus of this case study is on cattle development.

**Recommended Project Tasks**

1. Improvement of the roadway and central race system on the Department's experimental farm would enable all-weather use, even during the rainy season. This would permit greater utilization of the farm's facilities for training employees and groups of Rabonan farmers in livestock management as well as new and traditional crop production. It would also save labor, as mechanized equipment could be used with greater effect. Two miles (3.2 kilometers) of access road and races (fenced lanes) would be paved with local materials. The Public Works Department would be requested to provide the necessary labor and equipment.
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Total Allocation                                    | NZ$116,100| NZ$78,900| NZ$72,500| NZ$267,500|
(2) The fencing normally required for a beef cattle farm would subdivide 200 acres (81.0 hectares) of land to facilitate demonstrations of cattle and pasture management. Rabonan labor was judged capable of carrying out the work, but an experienced fencing contractor would have to be brought in from New Zealand as supervisor to ensure adequate standards in the work product. Construction of the nine miles (14.5 kilometers) of fencing would necessitate importation from New Zealand of treated fence posts, barbed and plain wire, and electric fence units.

(3) Construction of a satisfactory water supply and distribution network would enable cattle to be carried on the experimental farm at all times and thereby allow more opportunities for demonstration training. The building of troughs and installation of plastic pipe and an electric pump could be done by Rabonan labor if directed by an experienced local contractor.

(4) New circular cattle yards with gravelled surface and concrete races, capable of holding 200 cattle, would incorporate a veterinary bail for confining animals undergoing treatment, a spraying lane, and weighing scales, for training Rabonans in improved livestock care. All of the work could be completed by departmental staff and local labor under expatriate supervision.

(5) It was proposed to import eighty Polled Hereford heifers and ten bulls from New Zealand to establish a bull-breeding herd for long-term improvement of the local cattle industry, to assist the cattle subsidy scheme by providing local farmers with better quality stock, and to enhance operation of the tuberculosis and brucellosis eradication scheme (described in item 9, below).

(6) Pasture improvement, regarded as fundamental to Rabonan livestock management, would be carried out over the three-year period to further develop 35 acres (14.2 hectares) of partially improved farmland and to
establish new pasture on an additional 165 acres (66.8 hectares). Both areas were part of the Department's experimental farm. Guinea grass and siratro, both well-adapted forage grasses in the South Pacific, would be planted vegetatively in the customary Rabonan method. The pasture improvement plan would include subsidy of continuing research on various forage species, planting methods, and grazing management in the interest of showing Rabonan farmers how to upgrade feeding of their cattle.

(7) Since few Rabonans knew how to work cattle in large numbers, it was considered essential that training in stockmanship be offered. In time, this could be done at the experimental farm. At the outset, however, some Rabonans should be enabled to get this experience at established ranches in another Pacific Island country, such as Fiji, where field conditions were comparable to those in Rabona. It was proposed that during the three years of the project, from six to ten Rabonans be supported in this undertaking for up to six months each. Their travel fares, sustenance, and other allowances would be paid from the New Zealand grant.

(8) Certain Rabonan farmers who already met most of the requirements for successful small-scale livestock management would be subsidized in regard to critical needs on their own farms, such as improved water supply and distribution system, fencing materials, legume seed, and foundation stock. It was estimated that in each year of the project five local farmers could be subsidized.

(9) The Veterinary Officer in Rabona was represented as conducting a well-ordered testing scheme designed to eradicate both tuberculosis and brucellosis from all herds in the country. He had estimated that complete testing of local cattle might turn up another 100 reactors, animals found to have one disease or the other. It was recommended that owners of known reactors be compensated at NZ$50 per head for their destruction in order to achieve disease-free herds in Rabona.
(10) Robinson had observed that islanders usually butchered their beef cattle in the open, choosing a new site each time so that if all of the meat were cooked and eaten the same day the practice was reasonably hygienic. But this was not always true. He saw an urgent need for a mobile killing facility that could go from village to village to slaughter animals for individual owners and to inspect the meat for possible disease. The meat could then be put up for sale to local villagers immediately or be taken to the Government meat market in town. He recommended that such a mobile facility be provided until sufficient demand justified building an abattoir on Rabona Island. In that event, the mobile unit could be transferred to Tapolo, largest of the outlying islands, to improve the situation there. The plan was seen as providing disease inspection, more protection from spoiled meat, and better utilization of butchered stock at a reasonable cost,

(11) Refrigeration was unavailable in the outer islands of Rabona. At the time of Robinson’s study, cattle were killed there in the same manner as described for the main island, and the meat had to be consumed on the day of the kill if spoilage were to be avoided. It was planned for the first year of the project to establish a Government meat market with a cold storage facility on Tapolo Island, and to install another on Arangi Island the following year.

(12) A non-Government effort had already been made to build a small abattoir at Rewi, the Christian Mission farm on Rabona Island, but inadequate funding had prevented its completion. This killing facility had been intended primarily to service a first-rate piggery operated by the Mission, but could be used for butchering beef as well. To complete the construction of this abattoir as a project task would lower the priority for a more extensive and costly Government abattoir. The Agriculture Department would control the Rewi slaughterhouse to ensure adequate hygienic standards, but the Mission would manage it.
(13) If and when a Government abattoir were established in Rabona, local staff with training and experience would be in demand. Meanwhile, the same capabilities were needed to operate the small abattoir at Rewi upon its completion. It was proposed that a few promising Rabonans be selected for training in New Zealand slaughterhouses and freezing plants, and be supported with project funds for travel and other allowances while overseas. Upon returning to Rabona, these individuals would receive on-the-job training under a qualified abattoir manager to advance their competence to the point of taking over the entire responsibility.

(14) Robinson had discovered that no facility existed for delivering freshly slaughtered beef to needy, outlying villages on Rabona Island. The same applied to the catches brought in by the Government fishing boat. Provision of a refrigerated van from New Zealand would enable both needs to be served on an organized basis. The refrigerated vehicle would be useful for delivering fresh meat for sale to the existing Government meat market from the small abattoir at Rewi as well as from other places on the island.

(15) The Veterinary Officer in Rabona planned to produce bulls by controlled mating of the stock imported from New Zealand, but he suggested to Robinson that at a later date artificial insemination (AI) might be resorted to as a means of introducing unrelated sires to build up the Rabona herds. A New Zealand Rotary Club had offered to provide stores of AI semen for use in Rabona, on condition that liquid nitrogen storage of the semen could be arranged at the Veterinary Center. The modest sum of NZ$500 was proposed for this project task.

(16) As the only livestock scheduled for introduction to Rabona would come from New Zealand and would, in effect, be in quarantine when settled on the Department's experimental farm, a Quarantine Center as such was not a high priority item. Nevertheless, quarantine regulations were being drafted, and a minimum sum was
proposed to build the Center in the project's second year.

(17) Robinson had discovered a town milk-supply dairy in Rabona, run by a Church School with some two hundred boys in residence, but the milk processing situation called for considerable improvement, for reasons of health and economics. The existing demand for milk, from the new hospital as well as the mission, was estimated at 40 gallons (151.4 liters) daily. The project task in this case called for the Agriculture Department to install a proper processing shed and pasteurizing facility at the mission station, to be operated by the mission and to be made available for training and demonstration by the Department. Further, visits to New Zealand by the school's stock manager and agricultural teacher were recommended for the purpose of viewing town-supply farms and milk treatment plants near Auckland.

(18-20) Three project tasks are noted here only briefly, as they fall outside the main thrust of this case study. These recommended tasks were to deal primarily with subsidized improvement or extension of existing attempts by Rabonans to establish the local pig and poultry industries and to produce cheaper feed, with the objectives of creating greater self-sufficiency among small farmers, substituting locally grown products for imported ones, and increasing employment opportunities.

(21) The Department of Agriculture's commitment to supervise office work wherever needed for the project tasks would be prorated and recompensed from the New Zealand grant. In like manner, half-time of one clerk position, judged sufficient to handle financial control and progress reports, would be supported by the project.

(22) This project task to construct a Government abattoir was included in Robinson's original recommendations. It has already been mentioned that he had seen how the villagers in Rabona by custom slaughtered
their livestock quite simply in the open. Any surplus meat cut up for sale was taken to the Government meat market in town. The popular demand for marketed beef was expected to rise in future to a point that might require an estimated ten animals to be killed each week. At such time, a larger abattoir than the one at Rewi would be justified. However, priority for this project task was downgraded when Robinson decided to hold off until after the first year when experience with the Rewi abattoir (see item 12), the mobile killing facility (see item 10), and the refrigerated delivery van (see item 14) could be evaluated.

John Robinson's report was to be the basis for the document prepared for final review within the New Zealand Government. In his view, there appeared to be no technical impediments to the recommendations made. Likewise, there seemed to be general agreement about the political, economic, and social values of the scheme. However, he had overlooked the social implications of land tenure and local farmer attitudes. The importance of keeping the Rabonan people fully informed about details of the plan had not been followed up. Although Mete Tana, the Rabonan specialist in crop production, had tried to keep the local leadership informed during Robinson's visits around the country, the people still did not have good information about the proposed development. They were also confused by their recollections of the investigation made by Roger Matella and Ariki Talua the preceding November, and the differences between what had been talked about then and the plan of action now favored by Robinson and Pearsall.

The New Zealander's report and the project design he offered did not really relate the targets set in the project tasks to the original objective. This was due in part to the fact that the goals as represented to Robinson at the start had been rather vague and to some degree contradictory. The EAD official in the N. Z. Ministry of Foreign Affairs, Michael Bennett, had been rather general, open-ended, and more heedful of the long-term needs of Rabona. The Rabonan Minister of Agriculture, the Honorable T. H. Rangi, as a politician had been very specific and wanted immediate results
in the form of a dramatic increase in local beef production. He was impatient with Robinson's approach which seemed to postpone new land development and to restrict most of the project activity to the Department's experimental farm.

Robinson seems to have been well aware of critical needs in the area of Rabonan manpower development. While in Rabona he learned to accept the fact that the pace of life was much slower, and that the experience and techniques relied on by Rabonans who were already working with livestock were geared closely to their traditional system. Any future development of farms with large herds of cattle would inevitably demand adoption of new techniques and work habits and necessitate a major program of re-education. Unfortunately, Robinson did not, or could not, assess the extent and sort of training that would be appropriate to the situation. This omission left some room for doubt about the ultimate success of the project.

John Robinson's proposal was the only one considered in New Zealand. The informal study done by Matella and Talua had never been made known to the Rabonan Minister of Agriculture nor to the N. Z. Ministry of Foreign Affairs. Director of Agriculture Harvey Enoka was away on leave during the period when Robinson undertook his investigation, and Enoka had the only copies of the earlier report, other than the authors themselves who were then studying in Australia. While Robinson's plan fell within the provisions of the N. Z. Government's foreign aid program and budget, it unfortunately did not tackle the main problem as viewed from the Rabonan perspective.
CHAPTER IV

PROJECT APPRAISAL AND ACTIVATION

In New Zealand, John Robinson's report and proposals for livestock development in Rabona were endorsed and recommended for implementation by the officer in charge of the Rabona Foreign Aid Program, Michael Bennett, with a note that the entire presentation had been well received by the Acting Director of Agriculture in Rabona, Kenneth Pearsall. In turn, the Pacific Regional Director of Foreign Affairs, Harold Newcombe, accepted his officer's judgment and forwarded the material to the Director of the External Aid Division (EAD), noting that the proposed budget could be met by development aid funds still allocated to Rabona, and that the project concept was accorded high priority by the Rabonan Government. The EAD Director, for his part, was mainly concerned about whether the technical experts were in agreement and if the proposal fell within the scope of the Rabonan aid program. He based his approval on the favorable evaluations made by his subordinates. The Minister of Foreign Affairs concurred, as a matter of course, when assured of the project's feasibility and political desirability.

The formal proposal for bilateral aid, amounting to NZ$267,500 for the three-year period from September 1, 1972 to March 31, 1975 to improve the quality of Rabonan livestock and to provide certain related facilities, was finally presented to the New Zealand Cabinet on June 12, 1972.

The proposal before the Cabinet underwent several rather cursory appraisals. The Department of Agriculture, which had nominated Robinson for the study in the first place, supported the plan and offered to provide supervisory technical staff and whatever other support was needed to get the program underway. The Treasury added its recommendation, subject to elimination of the project task (see Figure 3, item 22) to build a Government abattoir.
Postponement of this NZ$60,000 job was advised until an abattoir of such size could be more fully utilized. The External Aid Division (EAD) in the Ministry of Foreign Affairs noted that implementation of the project offered scope for private sector participation in New Zealand, through the requisition of cattle stock and the design and equipping of such facilities as the cold storage and town milk-supply plants. On the whole, however, EAD considered the development scheme to be unsuitable for execution solely by the private sector, and recommended that it be coordinated and supervised by the N. Z. Department of Agriculture. This was acceptable to the Department. Cabinet approval followed, with general agreement that the entire project would be implemented along lines to be set down by the Department.

The report by John Robinson seems to have been assessed in a rather disjointed manner. Overall, the proposal was evaluated primarily by Michael Bennett, the EAD officer, even though his knowledge of the Rabonan situation was minimal. He was also in the ambiguous position of endorsing the work of a consultant whom he had selected and briefed. The Agriculture Department, which had nominated Robinson, was the only party with technical knowledge pertinent to the scheme, but it examined the merits of the proposition with only scanty understanding of the Rabonan scene. The Treasury investigation was concerned primarily with cost factors, i.e., that they were reasonable and that the total budget could be contained within the Rabonan aid allocation. Each of the principals involved in the Cabinet review reflected a different commitment which in each case was rather narrowly defined. The decision to go ahead with the scheme was, in the final analysis, based on the assurance that it fell within the broad policy set forth by New Zealand’s Foreign Aid Committee and that it was politically and economically desirable in the country making the request.

Once the New Zealand Government had committed itself to finance the project, the remaining questions to consider were who would participate in its direction and how would it be implemented. It now consisted of
twenty-one project tasks with an estimated total expenditure of NZ$207,500, since the item for a Government abattoir had been deleted.

Selection of the Project Manager

The task of activating the project fell to the EAD officer in charge of the Rabona Foreign Aid Program. Upon receiving notification of the Cabinet's approval, Bennett initiated two actions. First, he informed the N. Z. High Commissioner in Rabona and asked him to formally advise the Rabonan Minister of Agriculture that the project was all set to go. Second, he contacted the N. Z. Agriculture Department's Director and asked for his suggestions for prompt implementation. In response, the latter got in touch with John Robinson to inquire if the livestock specialist would be willing to carry on with the Rabonan venture. As Robinson had but recently retired from the Department, it was anticipated that he might have the time required to direct the operation. In any case, all of the Department's own officers were then fully committed to their regular duties.

After his two-week stay in Rabona, Robinson felt that he and his wife might well enjoy living and working there for two or three years. While he had but limited experience with livestock development in the tropics (having worked only in New Zealand's temperate climate), and was already past the age of retirement, he nonetheless agreed to accept the offer. The Ministry of Foreign Affairs was advised that the Agriculture Department would employ Robinson as director of the Rabonan project.

The choice of Robinson for this role was one that would have repercussions. He had proved to be quite competent in the posts held throughout his long service with the Department. However, he had never borne responsibility for the overall management of a project. His experience in coordinating a relatively diverse group of activities was limited. Never had he worked for any period of time in the kind of climatic and
and cultural environments represented by Rabona. The complex communication linkages, the logistic problems, the management of island personnel, the coping with inevitable crises—all of these together meant that the project would not be an easy one for any expatriate to manage.

Organizational Linkages

The overall structure for managing the Rabona project was intended to allow participation from different quarters by personnel who would form a loosely organized team to oversee the project and to represent their respective agencies. The one individual who would be primarily responsible for reporting back to the New Zealand Government, provider of the foreign aid funds, was Michael Bennett of EAD. He would also be Robinson's contact for any assistance the latter might require from the Ministry of Foreign Affairs. Similarly, within the Department of Agriculture, the Chief Advisory Officer for Farms, David Anderson, was appointed coordinator to work with Robinson on all matters needing attention in that department.

In Rabona, on the other hand, Robinson's principal contact would be the Director of Agriculture, Harvey Enoka, who by this time had returned from leave and had begun to pick up the threads of the projected livestock endeavor. Enoka was more than a little concerned about the way in which the proposal had been developed in his absence. He also felt that it would not really fill the need as envisioned by the Rabonan Government. However, the expatriate Kenneth Pearsall, now returned to his post as Veterinary Officer, was expected to continue to play a vital role because of his earlier relationship with Robinson in which the latter had depended so completely on him in dealing with Government staff and Rabonan farmers.

It had been accepted by all, as noted above, that prime responsibility for the undertaking rested with EAD in New Zealand. But from there on, the lines of communication and obligation were unclear. The loosely
organized group of officials who carried various responsibilities for the project were able to function only because of the generally recognized methods of government operation and the established linkages between the offices concerned.

Actually most of the action in New Zealand would take place in the Department of Agriculture. Robinson fortunately had developed a number of informal links within the Department during the period of his prior employment. These would be useful for obtaining support and assistance. As mentioned, he was officially entitled to seek aid from David Anderson, Chief Advisory Officer for Farms, who had been named coordinator and was willing to assist Robinson when he could. But Anderson had to fit all work on the Rabona project into his normal workload, already a demanding one, for no provision had been made to relieve him with respect to the new responsibility. Robinson was never clear who had the final authority in relatively minor matters, such as the selection of suppliers of materials or the specifications for personnel being recruited for the project.

How much authority he carried within the Rabonan Department of Agriculture was also never very clear to Robinson. Later, he would find it necessary to discuss almost every matter with either Harvey Enoka or Kenneth Pearsall so as to be certain of the Department's approval in order to avoid repercussions from subsequent misunderstanding. At times, the Minister of Agriculture was apt to intervene and ask for an explanation of some action taken.

Procedures regarding procurement and allocation of resource materials were left to be developed as the need arose. A formal set of procedures was never devised. It was generally agreed that progress reports would be submitted to EAD.
As outlined in Chapter IV, the Rabona project was relatively complex, requiring as it did the coordination of two government departments in New Zealand and one in Rabona to implement some twenty-one separate project tasks. While adequate thought was given to planning the technical aspects of livestock development in Rabona, the attention directed toward manpower needs and management of the diverse project tasks left something to be desired. As will be explained below, this oversight resulted in unexpected delays and cost overruns in the course of project implementation.

On-the-ground responsibility for the project and its component tasks rested with John Robinson as director. He was required to send monthly reports to Michael Bennett, the External Aid Division (EAD) officer in New Zealand, through the High Commissioner's office in Rabona. These reports were brief statements of progress which contained only little detail about the work completed and identified various problems as these developed. However, no provision was made for comparing monthly progress with project requirements as these were originally planned.

In Rabona, Robinson worked closely with the Director of Agriculture, Harvey Enoka. The latter was always willing to assist to the extent of his Department's limited resources. Robinson did encounter some difficulty in relating to Enoka, because of differences in their cultural backgrounds as well as Robinson's own unfamiliarity with the Rabona administrative operation.

For example, clerical and accounting services were performed by two of the Department's Rabonan employees who had been seconded to Robinson. Both of these individuals he found to be adequate in their performance of routine work, but in his opinion they lacked initiative, were reluctant to accept responsibility, and were lax
about attention to details. As a consequence, he spent an inordinate part of his time supervising and instructing them. In general, he found it hard to communicate with Rabonans on the staff. His discussions with Kenneth Pearsall reinforced his own estimates of Rabonan abilities. Director Enoka, on the other hand, viewed the problem more correctly as one of language and culture rather than individual ability. He considered that Robinson, like Pearsall, still had much to learn about dealing with Rabonans. Both expatriates, in his opinion, were too inflexible in their desire to operate by management procedures they were used to, and not ready to make allowances for the new environment in which they found themselves.

The coordination of project activities suffered as Robinson continued to experience difficulties in relating to his work supervisors, Rabonans who had been assigned from the Agriculture Department to oversee small jobs in the project. He was not always specific in giving out orders, expecting the men to use their own initiative in working out the details. However, their general lack of training caused a reluctance on their part to make independent decisions. Robinson felt that he had to watch them closely, and in many cases he sought assistance from Director Enoka to resolve misunderstandings in this area. Furthermore, he was not satisfied with the progress reports received from them, and he spent much time undertaking on-site checks of his own.

General planning of the project had been based on Robinson's report and recommendations. Each of the project tasks was considered a separate entity, and the budget amount for each was the major constraint on its implementation. The day-to-day scheduling and detailed planning were extremely loose, however. The main problem was to coordinate the availability of skilled manpower with the procurement of materials and equipment so that costly delays might be prevented.

The allocation, procurement, and management of resources became a critical focus of concern in many of the project activities. The separation of task budgets established clear guidelines in regard to
allowable expenditures for each distinct task. The procurement of material resources was divided between the two countries. In Rabona, Robinson would place requisitions with the Department of Agriculture for purchase and delivery of local goods to the designated project site. Overseas orders were sent, via the High Commissioner's office in Rabona, to Michael Bennett of EAD in New Zealand. He forwarded them to Agriculture where the Department's Chief Advisory Officer for Farms, David Anderson, received them and passed them on to the Purchasing Section. This segmentation of transmittals frequently gave rise to delays. On one occasion, for example, Bennett was away on leave and it was three weeks before the requisitions were sent on to Anderson. The main reason for using this system of communication was to take advantage of the special air freight delivery operating between the High Commissioner's office in Rabona and the Ministry of Foreign Affairs in New Zealand, thereby bypassing the normal but usually less dependable postal service. No serious problem existed with goods being lost or pilfered after receipt in Rabona, but at times the requisitioned materials were delivered to the wrong project site and remained there for days or even weeks before corrective action was taken.

There was little or no integration of work scheduling among the various project tasks. Each task proceeded more or less independently, and at its own pace. A common fault in scheduling was that supplies to be used by laborers recruited for a given task were sometimes not delivered promptly. Consequently, the laborers could not be put to work, yet their employment remained a cost against the project. This condition became particularly critical when essential resources ordered from overseas suppliers failed to arrive by the appointed date. Such delays were due in part to a lack of advance planning but also, perhaps more significantly, to a failure to recognize the logistic problems for what they were in a developing country like Rabona.

As the project tasks moved along, revisions of the original plan became necessary in order to meet problems that arose in implementation. These problems usually
resulted from the fact that the initial field survey by Robinson had been neither thorough nor realistic in regard to the actual conditions of Rabonan agricultural development. Unwanted delays and other impediments were dealt with on an ad hoc basis. There was no clear procedure for resolving breakdowns except by Robinson's own initiative and ingenuity. Plan revisions invariably meant increased expenditures of funds and labor to ensure a successful conclusion of the tasks in question.

Finally, in regard to the people of Rabona, i.e., the small farmers who ultimately were expected to benefit by the whole project, little care was exercised by Robinson to keep them informed of what was going on and how it related to their interests in livestock development. They could not help but notice the increased activity at the experimental farm, for Rabona is not a large place. Many of them, laboring under the impression that what they saw was implementation of part of the Matella-Talua plan, recalled the extended discussions in the villages about grazing cattle under the coconut trees. But what they observed at the Agriculture farm did not seem to be going in that direction, and the lack of explanation left them in confusion.

Outcome of the Project Tasks

The operational, supervisory, and control aspects of the Rabonan livestock development project are best reviewed by briefly examining the outcome of each of the twenty-one project tasks. These are carried out between September 1972 and March 1975, and were essentially separate units in terms of objective, implementation, and budgetary constraint. Several of them may be characterized as fairly routine and posed no serious problems. But some of the more vital ones were subjected to frustrating delays and substantial cost increases, resulting as often as not from inadequacies of planning and management. Whatever the outcome, however, valuable lessons were learned from the experience.
Roadway and Central Race System (1). Several delays occurred in the effort to improve road and race (fenced lane) facilities on the Agriculture Department's experimental farm. The Public Works staff, working under Robinson's direction, were not able to complete the task in one operation as planned, owing to an unexpected shortage of essential equipment for leveling and paving the road. Thus, much of the work undertaken at the start was abandoned temporarily, and later had to be redone because of washouts resulting from heavy rains. Several sections also had to be rebuilt where road paving had been skipped. The original estimate that two miles (3.2 kilometers) of road construction was needed proved to be inaccurate and a half mile (0.8 kilometer) had to be added. Costs thereby rose more than NZ$5,000, or 31 percent over the amount budgeted.

Fencing for Pasture Subdivision (2). In this task to subdivide 200 acres (81.0 hectares) of land for beef cattle pasture, two basic faults appeared. One related to procurement of supplies and the other to availability of experienced staff and supervision. Local laborers were employed to clear the fence lines and dig the postholes, but they had to stop when shipment of the essential posts and wire ordered from New Zealand was delayed. Meanwhile, it was discovered that an additional two miles (3.2 kilometers) of fence was required to ensure proper subdivision of the pasture. The workers were kept on for another two months with nothing to do, until it became evident that the materials would not arrive for some time. They were then assigned to other jobs.

When the task was reactivated, after the posts and wire and electric fence units became available, Robinson soon realized that the laborers lacked experience in

1The title and number (in parentheses) of each project task are the same as those appearing in Figure 3 which accompanies the summary of Robinson's original recommendations in Chapter III.
this area. This caused him to set up on-the-job training to bring their work up to minimum standards. He decided, shortly after, that this was taking too much of his time, and besides the work was too strenuous for him. He sent an urgent request to the N. Z. Department of Agriculture to dispatch an experienced fencing contractor to Rabona as soon as possible to supervise the job. Fortunately, a man was located who would donate his services under the Volunteer Service Abroad program, asking only that his basic expenses be met by the project. With these modifications, the task in Rabona was finally completed but the project went six months overtime and costs were doubled.

Water Supply (3). The original proposal to improve the water supply and distribution system on the Department's experimental farm had to be revised. Investigation showed that the existing deep well was in fact located on a neighboring property, whose owners threatened court action against the Department for trespassing. Consequently, a new well was dug on the government property. The work throughout was done efficiently, and without further delay, with local labor directed by a private local contractor. Apart from the legal question, the only problem encountered was the necessity of constructing the new well, which increased the project cost by 40 percent.

Cattle Yards (4). Progress on this task was reasonably good, allowing completion within the scheduled time. It was necessary, however, to redesign part of the original plan. This doubled expenditures owing to inadequate costing of items beforehand and to some delay in deliveries.

Cattle Supply (5). This project task was set up to provide bulls for herd improvement and to extend the holdings of local farmers under the Department's subsidy program. Robinson's initial proposal for eighty Polled Herefords and ten bulls was later revised sharply upward. Veterinary Officer Pearsall, concerned that this number was vastly inadequate to achieve the objective,
persuaded Robinson to purchase an additional 180 head.

This placed a considerable strain on management of the entire operation. Expenditures for the project task increased by 483 percent, partly because cattle prices in New Zealand were higher than expected by the time the purchase was made. The cattle were acquired in late 1973 and early 1974 but, owing to inadequate advance booking of shipping space, could not be delivered to Rabona until November 1974. Meanwhile, grazing and other care of the stock had to be provided in New Zealand.

In Rabona, a further problem arose when the cattle finally arrived. It was planned to hold only 90 head of cattle on the experimental farm and to disperse the rest immediately to local farmers under the cattle subsidy scheme. However, not enough farmers were ready to take over the additional stock, and the farm's facilities were incapable of coping satisfactorily with the crisis thereby created.

Pasture Improvement (6). This project task moved slowly at first because development of new pasture was carried out by Rabonan vegetative methods of planting new grass. Robinson's experience with seed sowing methods was substituted, and by mid-June 1974 the experimental farm showed very good examples of new pasture. However, it took more time than expected to train local workers in the new methods.

After June 1974, the situation deteriorated rapidly when the new pastures had to be overstocked with cattle (as described in item 5, above). During the following season, very little could be done by way of pasture renewal or maintenance and the earlier achievements were nearly wiped out. This was a good example of how changes in the course of one project task had serious consequences for progress in a related one. Better planning and integration of tasks could have avoided what happened.

Farmer Training in Stockmanship (7). The plan was to support six to eight Rabonan farmers in stock management under tropical conditions on cattle ranches of a neighboring Pacific Island country. But cooperation
from the country Robinson had in mind was not forthcoming. A training substitute was belatedly set up in the temperate climate of New Zealand. Only four Rabonans were able to benefit by the experience, owing to the late start in implementing this task.

**Extension of Cattle Subsidy (8).** Intended to provide needed materials, seed, and stock for selected farmers who had already demonstrated their capacity for successful livestock management on their own farms, this task fell somewhat short of the goal. The primary reasons were faulty administration and a breakdown in communication with the field, mainly due to a shortage of extension personnel. Judgments about the farmers' wants were not well founded, and the accounts for purchase of materials in New Zealand were flawed by clerical errors.

**Tuberculosis and Brucellosis Eradication (9).** This task was directed by Veterinary Officer Kenneth Pearsall. His able management of the Department's established test facility turned up a goodly number of diseased cattle, which were killed and their owners compensated from project funds, thus contributing significantly to the elimination of both diseases among Rabonan herds.

**Mobile Killing Facility (10).** The original concept of a killing facility to be moved from village to village for use by local cattle farmers was abandoned in the first year of the project. It proved to be unworkable because of scheduling problems and some reluctance by Rabonan farmers to change their custom of slaughtering stock, as described in Chapter III. Funds allocated for this task were then transferred to purchase a tractor in New Zealand and to construct a specially designed trailer for transporting cattle to the Rewi abattoir. Some delay was caused by the altered plan, but it was expected that the new equipment would be reasonably successful in field trials.
Cold Storage Facilities (11). Several factors contributed to unexpected delays in the task to establish meat storage and market facilities in the outer islands of Rabona. On Tapolo Island, difficulties arose immediately concerning site selection and land acquisition. Then, the fact that the island had no power source called for further study and plan revision. Finally, the site chosen for the beef storage plant turned out to be also the center of an active fishing industry, and the proposed refrigeration facility had to be enlarged in order to satisfy the storage requirements for fish as well as beef. The amended plan provided for an ice-making plant and two modified cold stores which were purchased in New Zealand and eventually shipped to Rabona. Total cost of this project task remained about as estimated. No reference was made in the final report to an additional facility for Arangi Island, as had been proposed.

Abattoir at Rewi (12). The plan to finish construction of the Church Mission abattoir at Rewi was realized after some delay. Equipment was late in arriving from overseas. But as the work was contracted out, Robinson was relieved of the worrisome problems of staffing and management which plagued him in most of the other project tasks. The estimated cost was exceeded by only a small amount.

After completion of the plant, it was discovered that local farmer demand was not sufficient to make full use of the project's investment. Although Rabona now had an abattoir of good standard for slaughtering both cattle and pigs, it was built too soon and years would pass before its true worth could be realized. Apparently no one had bothered at the start to match the projected growth rates of Rabona's cattle industry with the planned capacity of the plant.

Abattoir Staff Training (13). The task here was to train staff for the proposed Government abattoir, but when the latter was deleted by the New Zealand reviewers, the priority for such training dropped and nothing was done. Later, however, it became evident
that no local person was capable of managing the completed facility at Rewi. Therefore, a promising Rabonan was selected for six months' training in a New Zealand abattoir. Upon his return, even though this experience did not fully equip him for the job, he was appointed to manage the Rewi operation. Still later, project funds were allocated to train others in order to avoid total dependence on the lone Rabonan who now supervised the abattoir.

Refrigerated Delivery Van (14). The purchase of a van to transport meat from the abattoir to markets in outlying villages was a fairly simple matter, and the task proved reasonably successful. The original specifications had to be altered to provide a vehicle with four-wheel-drive capacity in order to combat the poor road conditions in outlying farm areas. This change necessitated a 70 percent cost overrun. Breakdown of the van at one point required importation of spare parts from New Zealand, which held up the operation for several months.

Artificial Insemination Facility (15). This task was just a modest addition to the Department's ongoing Artificial Insemination Program administered by Veterinary Officer Pearsall. The requested facility for liquid nitrogen storage of cattle semen was provided without any problem.

Animal Quarantine Center (16). Agricultural officials in both Rabona and New Zealand agreed that establishing a quarantine center should be given low priority, considering that all livestock being brought to Rabona were coming from New Zealand. The allocation for this task, therefore, was left intact. The matter would be reviewed later when other project tasks became less urgent.

Town Milk-supply Dairyshed (17). The proposal to extend the facilities of the Mission School's dairyshed suffered in implementation because of failure to identify clearly the technical equipment needed.
Essential components, some of which had to be custom-built, were imported from New Zealand, and delays were encountered both in manufacture and in shipment of the items. Finally, in late 1975, the dairyshed was commissioned even though it still lacked certain operating features. The estimated cost for this project task increased over 65 percent.

Once in operation, the new facility was revealed to be uneconomic as the public demand for pasteurized milk was not yet sufficient to ensure full production. Robinson recommended that New Zealand provide assistance in regard to fuel and other costs until the situation improved. Still being contemplated were the recruitment of an expatriate technician to help in the plant's operation, and the training in New Zealand of a promising Rabonan who could take over later.

Pig and Poultry Project Tasks (18-20). Since these tasks were incidental to the main concern of the livestock production project, i.e., cattle, little need be said here except that project subsidies of the pig and poultry schemes produced positive results. The research into production of cheaper feed went rather slowly, however, because the required technical equipment was delivered very late.

Supervision and Financial Control (21). The budget estimate for this task, which concerned the entire project, had to be doubled. This was due to the slow work pace of the staff and the need to devise simplified record-keeping procedures. Actually, office supervision was only routine and did not exercise more than nominal control.

By the middle of 1975, most of the project tasks in New Zealand's bilateral aid program for livestock development in Rabona had been completed. Funds for the project, including the many cost overruns, were provided for the three-year period 1972-1975, and expatriate personnel from New Zealand had been employed under contract during that time. Completion of the project meant phasing out the activity of Project
Director John Robinson, and transferring the various project tasks to the control and management of local personnel, mainly in the Rabonan Department of Agriculture.
Handover of the Project

No formal plan had been prepared by John Robinson for handing over control of the Rabonan livestock development project to the local administration. The general intent upon completion of the project was for the Rabonan Department of Agriculture to take over the operation. But when Robinson's work as director came to an end, it was already clear that no one in the Department, or elsewhere in Rabona for that matter, was capable of assuming full responsibility for managing a continuation of the activities inaugurated under Robinson's supervision.

It became evident that an expatriate would have to be appointed to manage the undertaking after Robinson's departure. The latter, prior to leaving Rabona, had recommended to the New Zealand Government that it continue foreign aid to Rabona by supporting a suitably experienced person to succeed him. The suggestion to bring in another expatriate, however, was not popular with Agriculture Department officials in Rabona. They considered the need for continued reliance on an outside expert to be a consequence of Robinson's failure to set up a proper program for training Rabonans as potential managers. Director Harvey Enoka, who was most concerned about this state of affairs, was convinced that it epitomized the poor planning and lack of foresight evident throughout the whole project. He was also critical on the grounds that the Government's localization policy with respect to personnel was not being applied in this foreign aid project.

One reason for the failure to attend to the need for local manpower development was that everyone had been too busy solving the short-term problems which kept cropping up. This pressure prevented adequate
consideration of the long-term requirements for future project management. In an attempt to forestall appointment of an expatriate manager, it was suggested that one of the two graduate students, Roger Matella or Ariki Talua, might be able to take over when they returned from their studies overseas. However, Director Enoka was not really certain in his own mind that either of the two men had sufficient practical experience as yet to direct the livestock development plan as a whole.

The New Zealand Government accepted Robinson's recommendation to continue support for an expatriate manager, and the Rabonan Government agreed to this arrangement. Director Enoka then decided to appoint the two most qualified Rabonans in his Department to understudy the new manager on a full-time basis. It was estimated that expatriate management would be required for at least another two years.

Evaluation and Analysis

Evaluation of the livestock project by its sponsors ought to have included, as a minimum requirement, an analysis of what progress had been achieved toward the assigned objectives, and also where the effort fell short of the target. However, no formal study of this kind was ever undertaken by either New Zealand or Rabonan officials. Such a simple evaluation of relative achievement would, of course, still leave unanswered other important questions, e.g., whether the stated objectives were realistic or not, and whether in view of other pressing developmental needs Rabonan planners should have given the livestock project the top priority it received.

In this final chapter, as a first step in evaluating some of the issues and outcomes of the project, it will be beneficial to review the overall objectives of the undertaking and to determine whether the method selected for implementation was, in the light of all available evidence, the best possible choice. In Rabona, decisions on priority needs for government projects
were in the last analysis made by the political leadership. Although officials in the Ministries (and, on occasion, outside consultants) produced the necessary information on which decisions were reached, the main role of these officers was to go along with the political judgments arrived at by the policy makers.

The livestock scheme, in fact, was initiated by economic planners in Rabona while they were exploring possibilities to reduce the country's considerable dependence on imported goods. On the face of it, the reduction of meat imports by developing a local livestock industry seemed to be a logical and technically feasible action toward achieving the desired long-term impact on the import problem. One government policy that would benefit such a scheme was the protection given to local industries by imposition of selective import restrictions and duties on overseas products. A local industry, once established, would be assured of a captive market for its product.

Agriculture officials in Rabona recognized that in the long run any livestock development would have to overcome two major problems. First, the country lacked the necessary manpower skills at all levels to sustain a livestock scheme of significant size. Second, any project other than those on government-owned land must meet the demands of local landowners in both social and economic terms if additional land were required for project use. In other words, the methods adopted for the care and feeding of cattle would have to meet local needs and conform to local conditions.

While the overall objective to develop a local cattle industry was generally acceptable, the timing and method of implementation were subjected to sharp criticism in some quarters. The Rabonan Director of Agriculture was outspoken in expressing his reservations to the Minister of Agriculture. But when these doubts were minimized by his superior, the Director had no choice but to take responsibility for implementing a project he did not wholly agree with.
The project design, as originally outlined by the Government expert from New Zealand, was adopted and the twenty-one project tasks were implemented with foreign aid funds provided by New Zealand. Completion of the project, however, did not bring attainment of the goal mandated by the Rabonan Cabinet, that is, to develop a local livestock capacity that would render the country self-sufficient in beef production.

The project, in its implementation stage, encountered frequent delays, multiple cost overruns, and many other problems not anticipated. In spite of these difficulties and the failure to accomplish the original goal, it was recognized both in Rabona and in New Zealand that with further development and proper management the trial effort could indeed have a significant impact on national as well as local livestock production in Rabona. While the basis for herd expansion and improvement had been proved at the Department's experimental farm, a need still existed to extend this knowledge and experience to Rabonans in the private sector who were prepared to invest some of their landholdings in livestock farming. This would require a number of follow-up projects, but no provision had been made for developmental activities in the future.

Many of the expected long-term benefits could have been achieved if more thought and imagination had been devoted to selecting the method of implementation. As described in Chapters II and III, two proposals were drawn up each of which dealt with the same problem but from a different viewpoint. One of these was the informal study conducted by the two Rabonan graduate students in agriculture. The other was the feasibility study carried out by John Robinson, recruited for the task from New Zealand. Evidence presented in this case study suggests that the ideas contained in the students' survey would, in fact, have provided a more realistic approach to achieving the desired long-term development.

The New Zealander's proposal, however, was the one that was implemented. It concentrated almost entirely on the expansion of existing Government farm facilities. In contrast, the Rabonan students' proposal was oriented toward experimentation with
natural resources in the countryside, for example, land areas for grazing cattle on plantations under the coconut trees. Their plan would have checked out a farming situation already familiar to Rabonans, the results of which could then be extended to other plantations in the island archipelago. A proposal of this sort would have brought private landowners into the project immediately and provided them with the essential learning experiences for the long-term development of a cattle industry.

Analysis of the manner in which this project was implemented highlights many of the issues that commonly arise during the course of development projects. A great percentage of the delays and cost overruns, for example, was due to inadequate planning in the early stages of the project and to the failure to conduct an in-depth study of the material needs and fiscal requirements of each of the twenty-one project tasks. In particular, many of the delays were caused simply by improper scheduling and clumsy procurement procedures in obtaining livestock, materials, and equipment from overseas.

Some understanding of the official attitude concerning the project's outcome may be gained from the final report which Robinson as director submitted to the New Zealand Ministry of Foreign Affairs. In this, he endeavored to identify the benefits that could be expected from implementation of the project's twenty-one tasks. He did not, however, attempt an overall assessment of project benefits in terms of the savings that could possibly be achieved in overseas spending as a consequence of increased meat production in Rabona. Cost overruns and delays were explained as the result of difficulties met in coordinating the necessary participation of various agencies in the two countries. Robinson parenthetically commented on problems he had encountered in working with what he regarded as inefficient and at times uncooperative government officials in Rabona, but he provided no details. Overall, he represented the project as having been executed in a satisfactory manner.
In Rabona, ill feeling about the project was evident within the Ministry of Agriculture. Some officials persisted in the attitude that the project had been imposed upon them by planners who lacked the technical understanding of livestock management in a tropical country like Rabona. The appointment of Robinson to direct the scheme was regarded as a poor choice. He was new to the tropics, and he was incapable of working closely with the local people. His lack of experience with management also meant that planning, scheduling, and control techniques were not employed in a professional manner. While the technical requirements of the Rabonan livestock development project were actually quite straightforward and should have been relatively easy to implement, Robinson's inattention to or ignorance of standard management practices not only resulted in unexpected delays and escalated costs but also created an atmosphere of ill will between the two countries in what was to have been a cooperative relationship.

Recently, a review of foreign aid programs in developing Pacific countries was commissioned by the South Pacific Forum, a regular meeting of the leaders of governments of seven self-governing or independent island countries at which time issues of common interest are discussed.1 The Task Force appointed to make the study, after intensive exploration of the topic, came up with some general observations and many specific recommendations. A few of the latter which seem to be particularly relevant to the Rabonan experience are summarized here.

1More Effective Aid, A Report to the South Pacific Forum, published by the Forum's trade secretariat, the South Pacific Bureau for Economic Cooperation, in 1976 (SPEC (76) 11), 34 pp. Members of the Task Force which authored the study were His Lordship Bishop P. Finau (Tonga), chairman, Mr. C. Craw (New Zealand), Prof. R. G. Crocombe (Fiji), Mr. A. V. Hughes (Solomon Islands), Mr. L. R. Morgan (Papua New Guinea), Mr. M. Qionibaravi (Fiji), and Mr. R. G. Spratt (Australia).
(1) The provision of foreign aid and expatriate personnel cannot alone overcome the critical internal obstacles to development which afflict many Pacific countries, such as inadequate land tenure systems (p. 3).

(2) All Pacific countries need to develop their pool of local professional skills. Projects everywhere have suffered from the lack of local knowledge and experience on the part of agricultural and other professional people brought in from overseas (p. 5).

(3) Tighter selection and more intensive briefing should be introduced for expatriate personnel in foreign aid programs (p. 5).

(4) Local counterparts to expatriate personnel should not be specified in aid planning unless they will be available and the organizational structure of the project makes sense with them in it (p. 5).

In a final comment, it should be noted once again that this case study of a livestock development scheme in a tropical country has documented a number of problems in planning and management which are not at all unique to the Rabonan situation, and which continue to characterize development projects in other parts of the South Pacific.
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