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ATTEMPTS SHOULD BE MADE TO SUSTAIN THE SUCCESSFUL ASPECTS OF KENYA'S RENEWABLE ENERGY DEVELOPMENT PROJECT

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EXECUTIVE SUMMARY

Kenya's Renewable Energy Development Project (KREDP) was born out of the energy crisis of the 1970s. Kenya's import bill for petroleum was leading to increased balance of payment deficits. Kenya's rapidly expanding population had increased the demand for fuelwood to a level where it was exceeding the replenishment rate of the country's forests.

The goal of the KREDP is to reduce the adverse impact of fossil fuel imports on Kenya's balance of payments and to make progress in achieving a balance in wood fuel supply and demand. This goal was to be achieved through numerous project activities including developing energy policies and plans, establishing energy conservation/substitution programs, introducing approaches to afforestation, and promoting experimentation with renewable energy technologies.

The $4.8 million grant project agreement was signed in August 1980. The Government of Kenya (GOK) is to contribute $1.7 million. As of July 1984, $3.8 million of the grant was committed and $2.1 million was disbursed.

The purpose of our audit was to: (a) evaluate how well the project was progressing toward meeting goals and objectives, (b) ensure that AID funded resources were effectively and efficiently utilized, and (c) determine how well the host government supported the project.

Overall, project implementation progressed slower than anticipated and several planned project activities were never started. The principal reasons for these shortcomings were (a) the project was overdesigned and attempted to address myriad activities in the energy field, (b) the GOK's Ministry of Energy and Regional Development (MOERD) was a newly created organization which lacked the institutional capability to support all the planned activities, and (c) the GOK's weak financial condition precluded the providing of funds and personnel needed to keep all project activities moving.

Although these shortcomings curtailed the level of institution building and the reaching of planned objectives, the project still had some successes. For example an improved charcoal jiko stove was designed which has the potential to save significant amounts of fuelwood. Also six agroforestry centers were established which can make a valuable contribution to wood fuel supplies. The project has demonstrated that opportunities exist to conserve energy.

Our major point of concern is whether these accomplishments and the entities created by the project will be sustained after AID assistance ends. The GOK has had difficulties financing project activities during project implementation and it appears that these problems will persist in the future. To help ensure that project activities continue to receive support, we recommend that USAID/Kenya continue to provide support to energy conservation initiatives with the excess funds that appear to be available from currency devaluations. We further recommend that budget forecasts be developed and funding plans be made so that the GOK can gradually take over the recurrent cost when AID assistance ends. (pages 4 to 8).

AID obligated $644,000 to finance soft loans to organizations to develop renewable energy technologies. USAID/Kenya has been unable to reach agreement with the MOERD on how this fund should be administered. We recommend that USAID/Kenya reach agreement with the MOERD on the utilization of these funds or reprogram them. (pages 6 and 7).

This report also includes findings pertaining to (a) settling a long outstanding advance (pages 8 and 9), (b) monitoring problems with Peace Corps participation in the project (pages 9 and 10), and (c) improving access to project vehicles (pages 10 and 11).

At the conclusion of the audit, our findings were discussed with USAID/Kenya. A draft report was also provided for their written comments. Their comments during the exit conference, and in response to our draft report were considered and where pertinent have been included in this report.

BACKGROUND

This project was born out of the energy crisis of the 1970s. Kenya's import bill for petroleum products had been growing and was contributing to balance of payment problems. Wood consumption for firewood and for conversion to charcoal was exceeding the replenishment rate of Kenya's forests.

These conditions will be greatly exacerbated in the future due to Kenya's high birth rate. This rate is considered to be the highest in the world at around 4 percent annually. Not only will this population growth increase demand for petroleum and woodfuel products, but it will increase pressure to convert present forest lands to agriculture production.

In 1979 the GOK created the Ministry of Energy (which subsequently became the Ministry of Energy and Regional Development) to start addressing these problems. AID's assistance to the ministry is channelled through the Kenya Renewable Energy Development Project (KREDP). This new ministry is also receiving assistance from several other external donors.

The goal of the KREDP is to reduce the adverse impact of fossil fuel imports on Kenya's balance of payments and to make progress in achieving a balance in wood fuel supply and demand. The project has four purposes:

-- Assist the MOERD to develop appropriate energy policies.

-- Help establish an energy conservation program and where possible substitute renewable energy in place of petroleum products.

-- Introduce approaches to afforestation.

-- Promote efficient production and use of charcoal.

-- Promote innovation and experimentation with renewable energy technologies.

Project implementation began in August 1980 and the planned completion date was September 1984. USAID/Kenya has recently extended a few of the project activities to December 1985. Project financing consists of a $4.8 million grant from AID and a GOK contribution of $1.7 million which includes costs borne on an in-kind basis.

Implementation of the KREDP is administered by the newly created Ministry of Energy and Regional Development (MOERD). Technical assistance is provided under a $1.9 million host country contract with Energy Development/International (ED/I), a New York based corporation. The U.S. Peace Corps is also providing volunteers to assist with project implementation.

OBJECTIVES, SCOPE AND METHODOLOGY

The objectives of our audit were to (a) evaluate how well the project was progressing toward meeting goals and objectives, (b) ensure that AID funded resources were effectively and efficiently utilized, and (c) determine how well the host government supported the project. Except as noted in this report, we found no other exceptions that are significant enough to report in these areas. Audit work was performed in Kenya in August 1984 and focused on project activities from August 1980 through August 1984.

We interviewed officials from USAID/Kenya, the Regional Economic Development Services Office for East and Southern Africa (REDSO/ESA), ED/I, the Peace Corps; and the GOK. We visited an agroforestry center and a seed orchard/energy demonstration center in Nairobi. We reviewed pertinent records and files of USAID/Kenya and the GOK.

This audit was made in accordance with the Comptroller General's standards for audit of governmental programs and accordingly included such tests of the program, records and internal control procedures as we considered necessary in the circumstances.

AUDIT FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

Successful Aspects Of Project Should Be Sustained

Overall, implementation of the KREDP did not proceed as planned. Progress in many areas was slower than anticipated and several planned project activities never got underway. Consequently, the level of institution building and outputs envisioned in the project paper will be less than planned.

The principal reason for these shortcomings is that the project was overdesigned and attempted to address too many aspects of the energy field in too short a time. Project activities were to include: energy plannning; energy information systems; energy conservation; energy substitution; establishing agroforestry centers, and extension nurseries; creating an energy development loan fund; performing applied research in areas such as rural afforestation, agroforestry, improved wood and charcoal stoves; improving charcoal kilns; and community water supply applications.

Another reason is that the GOK's Ministry of Energy and Regional Development is a newly established ministry. Consequently, they lacked the institutional capabilities to support the myriad of project activities which had been planned. Even a strong, well established ministry would have had difficulty implementing this complex project.

The GOK's weak financial condition precluded providing either the funds or the personnel needed to keep all project activities moving. Additionally, the GOK project manager was ineffective in securing increased support for the project from the government.

Many of these planned activities never got started or were only minimally achieved. For example, activities that did not get started were creation of an energy development loan fund, community water supply application, and improved charcoal kilns. Activities with only minimal progress were the implementation of a less developed country energy planning model and an energy data bank and library.

In spite of these difficulties, the project has achieved some notable successes. These are:

-- The project designed an improved charcoal jiko stove. This stove uses considerably less charcoal than traditional stoves resulting in a demand for them that exceeds the present supply. This stove has the potential to save significant amounts of fuelwood in Kenya if a large number of artisans can be trained and the country's production and marketing capacity expanded so that the stove can be widely distributed.

-- Six agroforestry centers and two subcenters have been established. These centers have the capacity to produce 7 million seedlings annually. They have the potential to make a valuable contribution to Kenya's wood fuel supply if a successful extension and farm demonstration program can be instituted. Development of an extension and farm demonstration program is planned during the remaining project period.

-- The project has demonstrated that there is considerable opportunity to conserve energy through industrial fuel conservation. This area could help alleviate Kenya's balance of payment problems by lessening the demand for petroleum imports.

We are concerned that the accomplishments and entities created during the project will not be sustained after AID assistance ends. USAID/Kenya is apparently going to phase out assistance to these energy conservation activities with the completion of the project. Most people we talked to agreed that it will be difficult for the MOERD to carry on what has been created without external assistance. As long as the GOK continues to have financial difficulties they will have problems supporting a new ministry and related project activities. The track record to date has not been very encouraging. The project has excess funds that can be used to prolong support of the project. These are discussed in the following sections.

Available Funds Should Be Reprogrammed - We believe that more than $1 million of project funding will not be spent by the project completion date. The rate of expenditures during four years of implementation has been far less than planned due to planned activities not getting off the ground and the devaluation of the Kenyan shillings (Kshs).

As of July 1984, the entire $4.8 million grant had been obligated. However after 4 years, only $3.8 million has been committed and $2.1 million has been disbursed. Thus more than half of the funds remain to be spent between now and December 31, 1985, the project assistance completion date (PACD).

How much excess funds will remain depends, to a large extent, on how the activities progress between now and the extended PACD. Project progress to date has been slow. Consequently, it is probable that the new workplans developed for the extended time period will not be fully executed.

Energy Development Funds Should Be Used - One of the more disappointing areas of the project has been the implementation of the Energy Development Fund (EDF). The purpose of the EDF was to provide grants or soft loans to organizations to develop and demonstrate innovative renewable energy technologies. To date, implementation of the fund has been a failure. Reasons for the failure to move the funds are (a) complex EDF operating procedures, (b) lack of a board to process applications, and (c) inaction on the part of the GOK project manager.

AID obligated $644,000 to be used for the EDF. As of September 1984 about $27,000 had been disbursed. At the time of our audit this $27,000 advance, provided more than 18 months ago, had not been accounted for. However, in response to our draft report USAID/Kenya indicated that $17,000 of the advance was accounted for in September and the balance in November.

We understand that procedures for administering the EDF are under revision. USAID/Kenya wants the MOERD to contract a non-governmental organization to be the coordinator of the fund and subcontract with another firm to help manage the fund.

MOERD officials indicated to us that they were very much against the above procedures. Apparently they want management of the EDF to remain in the ministry. Thus it seemed doubtful that the fund will become operational during the extended project period. In fact, no one we talked to was optimistic about the EDF's chances to succeed.

We agree with USAID/Kenya that the EDF should only be used if the money can be well managed, properly accounted for and only used for project purposes. We feel further attempts should be made to avoid an impasse which will block utilization of these funds. Perhaps some compromise can be reached that would be acceptable to the MOERD and USAID/Kenya and would not jeopardize the control and utilization of funds. Additionally, another alternative might be arranged to administer the fund. For example, contract a ED/I consultant to provide management assistance to the ministry.

Conclusion And Recommendations

Despite being complex and overdesigned, some success has been achieved by the project. We are concerned, however, that the GOK will be unable to support another ministry and all the related operating costs necessary to keep the activities going. We therefore believe that USAID/Kenya should consider extending the project and reprogramming the funds available in those project areas USAID/Kenya wants to support. This will keep the project going for a longer period of time and will permit the gradual take over of the cost of the activities by the GOK.

There may be at least $1 million of project funds that will not be spent by the PACD. In addition it appears doubtful that the $644,000 programmed for the EDF will be used. These funds can be used to continue to support selected project activities for several more years.

In addition, local currency generated from other AID programs might be budgeted to assist the project. In our opinion a planned phase-in of GOK financing should be developed as AID assistance is gradually phased out. This is consistent with the Agency's policy on recurring costs.

RECOMMENDATION NO. 1

USAID/Kenya undertake a budget review of the KREDP after the December progress report to determine how the remaining funds can be reprogrammed to sustain the activities in those areas where they can be effectively used.

RECOMMENDATION NO.2

USAID/Kenya in conjunction with the MOERD (a) reach agreement on starting the Energy Development Fund or (b) reprogram the funds if agreement cannot be reached.

RECOMMENDATION NO. 3

USAID/Kenya in conjunction with the MOERD project operating costs for those aspects of the program that USAID/Kenya plans to support using local currency generated funds to permit a gradual take over of funding by the GOK consistent with the Agency policy on recurring costs.

Outstanding Advance Should Be Settled Immediately

In May 1983, USAID/Kenya advanced the MOERD KShs 976,500 (approximately U.S. $69,750[1/]) to help defray various project expenses. In September 1983, USAID/Kenya attempted to get the GOK to clear the advance. Two meetings were held with the GOK and letters were written to them requesting settlement. As of September 1984, this advance had still not been accounted for.

In an attempt to get the MOERD to clear the advance, USAID/Kenya appropriately cut off making any additional advances until the KShs 976,500 had been accounted for. USAID/Kenya issued a project implementation letter to the GOK containing instructions, on how and when to account for this advance. The MOERD recently submitted receipts for the disbursements that had been made. However, it appears that only around KShs 200,000 (approximately $14,286) of these receipts would be acceptable for offset against the advance. Many of the receipts were unacceptable because supporting documentation was incomplete or they were for purchases which could not be retroactively approved. Thus KShs 776,500 (approximately $55,464) still needs to be accounted for.

Officials from the MOERD told us they didn't think they could provide any more receipts. They further stated that they never received the money AID had advanced. Apparently, the GOK's Treasury retained the advance and instructed the MOERD to gather receipts for past expenses they had already paid and apply them against the advance. We were told this is a normal GOK operating procedure. The project agreement makes provision for AID to reimburse the GOK for certain project expenses. The problem stems from slow accounting and reporting by the MOERD. At the conclusion of our field work, this matter remained unresolved.

1/Coverted at rate of 1 U.S. Dollar equals 14 Kshs.

Conclusion And USAID/Kenya Comments

A $69,950 cash advance has been unaccounted for over one year. This has slowed down project activities because AID has stopped further payments to the MOERD. This will affect progress of the extended project components.

In response to our draft report USAID/Kenya indicated that the advance has now been fully accounted for. We therefore have deleted our recommendation to settle the advance.

Peace Corps Participation In Project Requires More Monitoring

Peace Corps volunteers were not effectively used on the project and the GOK did not fulfill its commitments to pay part of the volunteers support costs.

The Peace Corps provided 10 volunteers for 2 year assignments to assist with project implementation. This group is completing their 2 years in September 1984 and a new group of 8 volunteers will be replacing them. We feel that USAID/Kenya should closely monitor the participation of this new group to ensure that some of the problems experienced by the first group do not reoccur.

Peace Corps officials told us that the first group of volunteers did not have counterparts and replaced Kenyans in establishing the agroforestry centers. When volunteers do the work without counterparts, institution building is diminished because Kenyans are not being trained to replace volunteers when their assignment is complete. This occurred because the GOK did not provide Kenyans at the centers to do the work. We do not believe it is a good use of project resources to have volunteers taking the place of Kenyans.

We also learned that the first group of volunteers did not work at the level preferred by the Peace Corps. Because the extension program had not been activated, the volunteers devoted their time to establishing the Agroforestry Centers. Peace Corps officials felt the services of the volunteers could have been effectively utilized if they worked at the village level on extension activities.

Another concern which could remain a problem is reimbursement to the new Peace Corps volunteers for logisitical support costs. As a general rule, government agencies which request the services of Peace Corps make some form of payment to support them. The MOERD informed the Peace Corps by letter that they would give each Kshs 2,000 per month to enable them to arrange their own accommodations. This arrangement was not

carried out. Peace Corps officials told us they had not been reimbursed for any volunteer support costs. We could not determine why this arrangement had not been enforced, because the Peace Corps director has left Kenya.

Conclusion And Recommendation

It is still uncertain the number of staff the GOK will be able to provide for the remainder of the project. Consequently, it is likely that the new group of volunteers, like the first group, will not have counterparts at the agroforestry centers to train. In all likelihood, the MOERD will continue to receive an inadequate budget, therefore, reimbursement for logistical support costs could continue to be a problem. We feel that USAID/Kenya can facilitate project implementation by monitoring more closely the Peace Corps inputs to the project.

RECOMMENDATION NO. 4

USAID/Kenya follow up on Peace Corps volunteer assignments after they are in the field to ensure that (a) they have counterparts; (b) are being used in an advisory/training role and not in effect taking the place of Kenyans; and (c) logistical support arrangements are complied with.

Project Vehicle Access Needs To Be Improved

Since project inception, vehicles under control of the GOK motor pool were not readily available for project activities.

It was intended that these vehicles would be used exclusively for the project. ED/I officials told us that because the vehicles are in the motor pool they are not as available for project activities as they should be. For example, as the agroforestry centers were completed, six vehicles were to be removed from the motor pool and assigned to the centers. At the time of our audit, three vehicles still remained in the motor pool. When project personnel need transportation they must go through the same cumbersome procedures (filling out forms and obtaining approvals) as other GOK employees. This wastes technicians' time and project resources. These conditions should not be permitted to continue because they are contrary to the project agreement and adversely affect project activities.

The lack of availability is contrary to the following project agreement covenant:

> "Section B.3. Utilization of Goods and Services
>
> Any resources financed under the Grant will, unless otherwise agreed in writing by AID, be devoted to the project until the completion of the project, and thereafter will be used so as to further the objective sougnt in carrying out the project."

The project vehicles are subject to the same budget restrictions placed on all GOK vehicles. The GOK limits the amount that can be spent to operate a vehicle to only Kshs 1,000 per montn (about $67). This amount is inadequate when gasoline alone costs more than $2 per gallon.

This situation could have been avoided had the vehicles been retained under the control of the ED/I contract team rather than under the control of the host government. Had this been done the vehicles would have been available to the team at all times. The vehicles could have reverted to the GOK at the end of the contract rather tnan at the beginning of the project.

Conclusion And USAID/Kenya Comments

Vehicles financed by AID have not been available for project use as required. This is contrary to the project agreement and has adversely affected project activities. This situation could have been avoided had the vehicles been placed under the control of ED/I rather than under the control of the GOK motor pool where they can be used for any purpose.

USAID/Kenya in response to our draft report indicated that a project implementation letter was issued instructing the GOK to use project vehicles only for project purposes. Further the response indicated that all project vehicles are now being utilized only for project purposes. We have therefore deleted the recommendation contained in our draft report.

APPENDIX A

List of Recommendations

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RECOMMENDATION NO. 1 — 7

USAID/Kenya undertake a budget review of the KREDP after the December progress report to determine how the remaining funds can be reprogrammed to sustain the activities in those areas where they can be effectively used.

RECOMMENDATION NO.2 — 7

USAID/Kenya in conjunction with the MOERD (a) reach agreement on starting the Energy Development Fund or (b) reprogram the funds if agreement cannot be reached.

RECOMMENDATION NO. 3 — 8

USAID/Kenya in conjunction with the MOERD project operating costs for those aspects of the program that USAID/Kenya plans to support using local currency generated funds to permit a gradual take over of funding by the GOK consistent with the Agency policy on recurring costs.

RECOMMENDATION NO. 4 — 10

USAID/Kenya follow up on Peace Corps volunteer assignments after they are in the field to ensure that (a) they have counterparts; (b) are being used in an advisory/training role and not in effect taking the place of Kenyans; and (c) logistical support arrangements are complied with.

APPENDIX B

List of Report Recipients

	No. of Copies
Field Offices	
USAID/Kenya	5
REDSO/ESA	2
AID/Washington	
AA/M	1
AA/AFR	5
AA/PPC	1
LEG	1
GC	1
AA/XA	1
AFR/EA	2
M/SER/COM	2
M/FM/ASD	2
PPC/E	1
PPC/E/DIU	4
Inspector General	
IG	1
AIG/A	1
AIG/II	1
IG/EMS	15
RIG/A/C	1
RIG/A/D	1
RIG/A/K	1
RIG/A/M	1
RIG/A/T	1
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