Terminal Evaluation

Africa

1. Outline of the Project

Country:

Republic of Kenya

Project title:

Applied Electrical and Electronic Engineering

Issue/Sector:

Telecommunications

Cooperation scheme:

Third-Country Training Program

Division in charge:

N/A

Total cost:

15 Million Yen

Period of Cooperation   Fiscal Year 1998 - 2000

Partner Country's Implementing Organization:

Jomo Kenyatta University of Agriculture and Technology (JKUAT)

Supporting Organization in Japan:

Related Cooperation:

Grant Aid; "Project for Improvement and Expansion of Jomo Kenyatta College of Agriculture and Technology"
Project-type Technical Cooperation; "Jomo Kenyatta University of Agriculture and Technology (Undergraduate Programme) :
JKUAT in Kenya"

1-1 Background of the Project

Many sub-Saharan African countries including Kenya have tried to move away from the agriculture dependent industrial structure continued since their independence and to diversify their industries. At the same time, these countries have a serious problem of an increasing unemployment rate caused by the increase of population mainly in the urban areas. As two thirds of the working population was engaged in informal sectors, it was an urgent task that these countries reform their structure. Under these circumstances, the fostering of small and medium-size enterprises was a common issue in these countries. It was necessary to disseminate the techniques linked to the improvement of industry and upgrade the adjustment and administration capacities of economic and social foundations supporting industry. Among the industries, electrical and electronic engineering techniques especially needed to be disseminated.

The Government of Japan through Jomo Kenyatta University of Agriculture and Technology (JKUAT) has been cooperating in this area for many years. This has resulted in the adjustment of personnel and facilities in Kenya and the organization of facilities for cutting-edge educational research in the field of electrical and electronic engineering techniques.

Considering these facts and the importance of electrical and electronic engineering techniques in the industrial policies of the surrounding countries including Kenya, the Government of Japan accepted the request from the Government of Kenya to implement a Third-country Training Program on electrical and electronic engineering techniques to sub-Saharan African countries.

1-2 Project Overview

For the diversification of industry of the English speaking African countries, JICA dispatched the Japanese Short-term Experts and implemented the training to the persons engaged in the field of electrical and electronic engineering to foster engineers in this field.

(1) Overall Goal

Knowledge and techniques in the field of electrical and electronic engineering are upgraded in the English speaking African countries.

(2) Project Purpose

To improve the knowledge and techniques of the training participants who are from English speaking African countries in the field of applied electrical and electronic engineering techniques.

(3) Outputs

1) Participants newly learn the design and fabrication of electronic circuits and each participant has the opportunity to improve his/her capability.
2) Participants develop the appropriate technology in the field of electric and electronics suitable for their respective local conditions.

(4) Inputs

Japanese side:

Short-term Experts	1 (excluding FY2000)
Local Cost	13,791,360 Kenya Schilling (15 Million Yen)

Kenyan side:

Counterparts	45
Local Cost	

(5) Participant Countries

Botswana, Ethiopia, Lesotho, Malawi, Namibia, Seychelles, Swaziland, Uganda, Tanzania, Zambia, Zimbabwe, Kenya and Rwanda.

2. Evaluation Team

Members of Evaluation Team	JICA Kenya office (Consigned to the local consultant: Almaco Management Consultants Ltd.)
Period of Evaluation	22 February 2002 - 25 March 2002

Type of Evaluation:

Terminal Evaluation by Overseas Offices

3. Results of Evaluation

3-1 Summary of Evaluation Results

(1) Relevance

According to the review of the Kenya development plan and interviews with the policy makers of Uganda and Tanzania, the purpose of the Third-country Training Program is consistent with the industry development aspirations of some participating countries from the viewpoint of job creation and increasing incomes. Also the Ministries that designate participants and ex-participants recommended that the course be extended for five years, which shows the relevance of the Project.

(2) Effectiveness

Forty-five (45) participants were trained as planned. According to the answers to the questionnaire from ex-participants (20 out of 45 ex-participants), they are working in the electrical and electronic industry and utilizing the acquired knowledge and skills, and those who work in the training institutions are involved in dissemination of the skills, all demonstrating the effectiveness of the course. Judging from above, the Training was effective.

(3) Efficiency

The actual expenditures were within budget and estimates and all those trained and interviewed were satisfied with the output.

This shows that the Training maintains cost efficiency and that the Project is efficient. There was no major problem with regard to administration of the Training on JKUAT, and 69 percent of respondents answered there was no problem with regard to the equipment and software they used. However, the application was not delivered on time in some cases.

(4) Impact

1) Thanks to the Training, the ex-participants have disseminated the acquired knowledge and skills in the field of electrical and electronic engineering in many ways and upgraded their knowledge and skills. For example, eight lecturers who joined the Training from Kenya Polytechnics utilized the attained knowledge and skills in the curriculum of the diploma course, after returning home.
2) The number of participants from each country is still too small (less than the critical mass) and the facilities and equipment are insufficient for dissemination and use of the acquired knowledge and skills to make a meaningful impact on the policies and economies of the specific countries.

(5) Sustainability

There are a number of problems impeding sustainability of the Training:.
1) Lack of facilities, equipment and software in the participants' work places and countries is a common and major constraint to the dissemination and transfer of the acquired knowledge and skills.
2) There is lack of clear strategies for application of the newly acquired knowledge and skills by the course participants on return to their work places in their respective countries.
3) There was no in-built mechanism for follow-up of those trained as a means of ensuring post implementation sustainability.

3-2 Factors that promoted realization of effects

(1) Factors concerning Planning

The training committee of JKUAT made significant contributions in implementing the plan.

(2) Factors concerning the Implementation Process

1) Because discussions among JICA, JKUAT and other interested parties were smooth at the implementation of the Training, the Training itself was very meaningful.
2) JKUAT made significant capability improvement in managing Training expenses. Especially with regard to the remittance from JICA for the Training, JKUAT kept expenses within the limits of the annual budget as planned.

3-3 Factors that impeded realization of effects

(1) Factors concerning Planning

1) There are no training policies and strategies on programs on software in the participating countries.
2) The participating countries have not settled or promoted a structural framework to develop the industrial field of electrical and electronic engineering techniques.

(2) Factors concerning the Implementation Process

1) Due to the insufficient communication between JKUAT and the nominating ministries of each country, the organizations where participants work do not know of the training itself or can not apply the nominees because of the delay of application forms.
2) The organizations where the participants work can not prepare the necessary facilities and equipment for technical innovation because of the lack of a budget, and the acquired skills cannot be disseminated.
3) JKUAT faced financial difficulties after the Government of Kenya decreased funding to JKUAT; therefore, JKUAT could not prepare funds for the conference proceedings.

3-4 Conclusion

The Training met the objectives of industrial development of the participating countries, interested parties such as policy makers, the nominating ministries of participants, and participants. The contents of the training were consistent with the needs of the participating countries and participants. However, there remain many problems, such as a lack of facilities and equipment, and so the overall goal has not been accomplished and sustainability is not likely.

3-5 Recommendations

(1) Judging from the needs of the related countries, it is recommended that the course be extended five 5 years.

(2) There is need to increase the number of participants to accelerate the dissemination process and accomplishment of the overall goal.

(3) There is need to establish a follow-up mechanism to ensure application and dissemination of the skills gained from the course, such as allocating a secretariat at JKUAT, facilitating further development, and conducting exchanges to resolve problems.

3-6 Lessons Learned

(1) It is necessary to build into the original plan a scheme ensuring sustainability after the termination of the cooperation and promoting the effects continuously at the design or planning stage of the training course.

(2) A master plan including objectives, inputs, implementing system, annual plan and implementing schedule is essential for the success of the Project and it should be formulated based on the cooperating activities of all persons interested in the project.

(3) It is important to have a timely meeting among the interested parties such as at the commencement, planning and implementation stages of the project.

3-7 Follow-up Situation

N/A.