

Terminal Evaluation

Middle East

I. Outline of the Project

- Country: The Kingdom of Morocco
- Project title: Road Maintenance and Construction Machines
- Issue/Sector: Transport
- Cooperation scheme: Third Country Training Program
- Division in charge: JICA
Regional Department VI (Africa, Middle East and Europe), Middle East and Europe Division
- Total cost: 43 million yen
- Period of Cooperation (R/D) December 8, 1999
January 31, 2000 - October 24, 2003
- Partner Country's Implementing Organization: The Institute of Training on Road Maintenance and Construction Equipment (IFEER), Ministry of Equipment and Transport
- Supporting Organization in Japan:
- Related Cooperation Grant Aid "The Project of Construction of the Institute of Training on Road Maintenance and Construction Equipment" (1991, 1992)
Project-type Technical Cooperation "The Road Maintenance and Construction Equipment Training Center Project " (April 1992 - April 1997)

1. Background of the Project

In Morocco, road transportation is the most important means of transportation, thus the Moroccan government has put an emphasis on the expansion and maintenance of roads. Aiming at the capacity building and efficient work of the technicians of road construction and equipment maintenance, the government of Morocco requested Japan to provide Grant Aid and Technical Cooperation. In response to this request, Japanese government cooperated in constructing "The Institute of Training on Road Maintenance and Construction Equipment (IFEER)" and provided necessary equipment by Grant Aid, and then executed technical transfer by the Project-type Technical Cooperation during April 1992 - April 1997. In the process of this cooperation, the Project successfully accomplished its objective by training nearly 600 technicians and 140 technicians were accepted to the short term specialized courses.

As the sole specialized training center for the technicians of road construction and maintenance in Morocco, IFEER has qualified instructors and has conducted effective training. In December 1999, the agreement (Record of Discussions) on the Third Country Training Program on "Road Maintenance and Construction Machines" for the benefit of 18 French-speaking African countries was signed between JICA and IFEER. Under this agreement, the Training was conducted 5 times during January 2000 to October 2003 and accepted 100 participants.

2. Project Overview

In order to improve knowledge and skills in the field of road maintenance and construction machines, 1month technical training course was organized at IFEER, for the benefit of 18 French-speaking African countries, 5 times during Japanese fiscal years 1999-2003.

(1) Overall Goal

To provide the participants from African countries with an opportunity to improve their knowledge and skills in the field of Road maintenance and construction machines and to improve those technical level in the participating countries.

(2) Project Purpose

To improve knowledge and skills of the participants from African countries in the field of Road maintenance and construction machines.

(3) Outputs

- To develop relevant skills and knowledge related to road maintenance and construction machines
- To improve their knowledge, skills and abilities and transfer them to other technicians in their own countries
- To identify new needs with regard to the knowledge and skills in this area

(4) Inputs

Japanese side:

Training Cost : 3,415,532.27 DH(about 43 million Yen)

Moroccan's Side:

Training Instructors, Training facilities and equipment

Training Cost : 661,580.00 DH(about 8 million Yen)

(5) Participating Countries

Benin, Cameroon, Cape Verde, Gabon, Guinea, Guinea-Bissau, Mauritania, Senegal, Togo, Burkina Faso, Central Africa, Djibouti, Mali, Niger, Tchad, Ivory Coast, Madagascar, Guinea Equatorial

II. Evaluation team

Members of Evaluation Team

JICA Morocco Office (Eihiko OBATA, Deputy Resident Representative and Ouafae SBITI, Office Staff)

Period of Evaluation

15 / March / 2004 - 31 / March / 2004

Type of Evaluation:

Terminal Evaluation

III. Results of Evaluation

1 Summary of Evaluation Results

(1) Relevance

For African countries, economic infrastructure development such as roads etc. is highly necessary and training of a high quality engineer is important. The objective of the Training Course matches this development issue with regard to the improvement of road maintenance technique of the participating countries.

The contents of this training covers wide range of training through theory, practice and on-site visit about the operation technology of various construction machinery, their structure, maintenance technology, the efficient use in consideration of cost and selection, safety measures, etc. And the training is carried out 5 times to a total of 100 participants from 18 countries.

According to the questionnaire at the end of each course, about 70%, 90%, and 75% of participants has answered "It was very good" or "good" about the contents covered, the level of training and the depth of the contents respectively, therefore the validity of the course is judged high.

(2) Effectiveness

About 90% of participants have answered in the questionnaire that the contents of training met their expectations, and it is judged that the contents corresponded to technical needs. Moreover, in the interview to the training participants (46 persons) who went back to their countries, holding seminar, technical guidance to a coworker, circulation of a training text, etc. are performed, and several persons got the scholarship to a higher qualification and many participants said that the training was useful to their promotion.

The fact that training participants raise their skill and contribute to the spread of their skill to others is considered that this course has led to the level-up of road-maintenance technology by the efficient use of construction machines.

On the other hand, the needs about the maintenance of electronic device and information processing, etc. were specified for further improvement of road maintenance technology in future.

(3) Efficiency

IFEER, as the sole construction machinery training center in Morocco, has accepted many trainees from public and private sector and the number of them amounts to about 2600 persons in total from 1993.

Based on this training experience, a technical level of instructors is high and the secretariat is abundant in experience, it can be said that such existing human resources and material resources, such as an institution, equipments, etc. mainly built and supplied by Japan's cooperation, were efficiently utilized in the training course.

In the questionnaire at the end of each course, the contents of training, instructors, accommodations are satisfied by participants with the rate of about 90%, 90%, and 80% respectively.

And about 90% of participants answered that the impression of IFEER was good through the whole training course, and most of them wished training of other themes in IFEER again. On the other hand, with the problem of the weather condition at the time of training, there were years which received restriction in practical operation training in the field, so training efficiency had been affected several times.

(3) Impact

By the result of the interview to the training participants who went back to their countries, many of them spread their knowledge and technology, and these activities brought the improvement in a technical level of their organization.

It is thought that these activities led to the efficient use of construction machinery, high work quality, shortening of working hours, growth of the durable years of machines, and contributed to the efficient and exact road maintenance in a participating countries.

Also by the execution of this Third Country Training for the benefit of African countries, IFEER has become well known in Morocco and has enhanced its status in the African region.

(5) Sustainability

The participants are performing technology-transfer activities in their own countries as mentioned above, and it is judged that the training effect is maintained and expanded.

IFEER, as the Morocco's only training organization over 11 years since its foundation in 1993 in the field concerned, carried out continuation training and reeducation course for the benefit of public and private sector engineer.

And IFEER's budget has been allocated by the state about 5 million DH(s) (about 60 million yen) every year, in addition, IFEER has the income from those training course.

The number of trainees is constantly exceeded 200 persons annually, although it cannot say that the financial situation is sufficient, it is judged that the sustainability as an organization is stable.

IFEER purchased audiovisual equipment, the notebook PC, the maintenance tool etc. by its own budget in order to complement the effect of the Third Country Training, but it is difficult for IFEER to invite foreign trainees by its own budget, and for the participating country side, it seems difficult to dispatch trainees by their original budget, therefore the continued support is required.

2 Factors Promoting sustainability and impact

(1) Factors concerning to Planning

The training program covered broad contents and its level and depth had almost satisfied the participants.

(2) Factors concerning to the implementation Process

Excellent ability of instructors, sufficient equipment and accommodations, and also flexible reexamination of a program according to the needs of participants and arrangement of a visiting lecturer flexibly heightened the training effect.

3 Factors inhibiting sustainability and impact

(1) Factors concerning to Planning

Since training implementation time was comparatively rainy season, the field training for equipments operation had been affected a little.

About 60% of participants had an opinion that the training period was short, and also an opinion that there is little time to spare in a program. In order to better meet the technical innovation of construction machinery, there were also many opinions which wish the additional training about electronic device and information processing.

(2) Factors concerning to the Implementation Process

According to the interview to the training participants who went back to their countries, 5 participants out of 46 responded that the knowledge and skill obtained by training are their personal things, and they did not spread their technique.

Survey of skill utilization and its spread is not conducted by the training implementation organization.

4 Conclusion

The contents of training, instructor's quality, and the training institution got the high degree of satisfaction generally, and the training courses were carried out effectively, and, as for the training participants, the many are also tackling technology transfer after returning their countries, therefore it is judged that the original purpose of the improvement in technical power and a technical transfer were almost attained.

From now on, reexamination of the season of training and its duration, and evolution of the training program which corresponds to the technical innovation of construction machinery will be required.

5 Recommendations

(1) By the questionnaire to training participants, many of them pointed out the shortness of a training period. It is recommended to reexamine the contents of a training program and a training period in consideration of increasing of practical training portion which many participants requested, and incorporating electronic device maintenance and information processing in order to meet the technical innovation of construction machinery in recent years.

(2) Reexamination about training time is recommended so that the training course can be carried out at the time for which field training of equipments operation would not be affected as much as possible.

(3) It is desirable for IFEER to monitor the situation of the technology spread by the trainees by sending questionnaire etc. so as to raise motivation to technical transfer, and to grasp a participating country's needs continuously in order to harness them in future training.

(4) According to the interview, all the participants have expressed the continuing needs for this kind of training and its necessity, therefore it is desirable to carry out the Third Country Training Course continuously.

6 Lessons Learned

In order to secure practice of the technical transfer after returning home country, it should be considered to write clearly in the invitation document about the expectation of technical transfer and the execution of follow-up survey by the training implementation organization.

7 Follow up Situation

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