

Terminal Evaluation

Middle East

1. Outline of the Project

Country:

Syria

Project title:

Training for Standard Measurement and Calibration Technique on Electricity

Issue/Sector:

Industry/General

Cooperation scheme:

Third-Country Training

Division in charge:

Middle East and Europe Division, Regional Department IV (Africa, Middle East and Europe)

Total cost:

6 million yen

Period of Cooperation

FY 2001 - 2003

Partner Country's Implementing Organization:

National Standards and Calibration Laboratory (NSCL)

Supporting Organization in Japan:

Ministry of Economy, Trade and Industry (METI)

Related Cooperation:

Project-type technical cooperation; "National Standards and Calibration laboratory" (Phase 1 & 2)

1-1 Background of the Project

The government of Japan implemented a Project-type Technical Cooperation titled "National Standards and Calibration laboratory" (1987-1992) to the National Standards and Calibration Laboratory (NSCL) in the Scientific Studies and Research Center, and established and settled electrical and thermal measurement standards. Furthermore, Phase 2(1995 - 1999) of the plan was implemented to improve the technical accuracy established in Phase 1 as well as to establish and adjust the length, the weight and the pressure standards. Through the cooperation, the NSCL was recognized as the organization that set the national electrical and thermal measurement standards. The NSCL was also recognized as the organization that fulfilled the secondary standards to the national standards in other fields, established standard measurement, calibration techniques (machine operation; maintenance and management of equipment; accuracy management; record management and environment management) and reached a level where the organization could offer calibration services to the industry.

In the meantime, the industrial levels of its surrounding countries were still low, and many of them either had no measurement standards or had one with low accuracy. To improve the quality of industrial products in those countries, it was necessary to establish measurement standards which were a part of the industrial foundation, and the needs of technical cooperation in this field was high. Therefore, by implementing a third-country training, the NSCL could notify the level of its technique to the public, deepen the international communication on metrology engineering, and increase the likeliness of improving its technical level to a greater degree. Under these circumstances, upon the request from the government of Sri Lanka, the Japanese government implemented the third-country training "Training for Standard Measurement and Calibration Technique on Electricity".

1-2 Project Overview

The skills on electrical measurement standards and calibration are transferred at the NSCL to the participants from the countries surrounding Syria through the project.

(1) Overall Goal

1) Electrical Measurement is efficiently utilized in the countries which dispatched participants to the training course.

2) The capability of NSCL to implement and manage training courses for foreign participants increases and the South-South cooperation in the Middle Eastern region is promoted.

(2) Project Purpose

Participants from Syria and Middle Eastern Arab countries acquire skills for assuring electrical measurement standard and calibration.

(3) Outputs

The participants understand theory and practices on Electrical Measurement.

(4) Inputs

Japanese side:

Lecturers	3
Local Cost	50,576 dollar
Trainees received	19

Syrian Side:

Lecturers	3
Local Cost	446,250 Syrian pound (1 million yen)

(5) Participant Countries

Bahrain, Jordan, Lebanon, Oman, Saudi Arabia, Algeria, Egypt, Tunisia and Syria.

2. Evaluation Team

Members of Evaluation Team JICA Syria Office
(Commissioned to: Nohammed Doboush)

Period of Evaluation 1 September 2002 - 10 February 2003 **Type of Evaluation:** Terminal Evaluation by Overseas Office

3. Results of Evaluation

3-1 Summary of Evaluation Results

(1) Relevance

The participant countries were faced with the necessity of improving the quality of industrial products to promote economic development and economic cooperation among neighboring countries. For that purpose, it was necessary to enforce an electrical measurement standard and calibration. Therefore, the training purpose met the needs of participant countries. As there were some participants unspecialized in the electrical measurement standard, it was necessary to offer general training in addition to the specialized training.

(2) Effectiveness

The training consisted of two parts; lectures on theories and practices which conduct experimentation. The training focused on techniques necessary in the participants' daily works and was evidently effective. Among the participants, those who were engaged in specialized work related with electrical measurement standard and calibration, understood all the program subjects thoroughly and improved their knowledge through the theoretical and practical lectures of the project. On the other hand, those participants who were not specialized in the fields needed to learn general information and techniques to begin with. The skills

and knowledge level of the participants varied, so the comprehension level of the training differed among the participants. The training was targeted towards the group of participants with high specialty. According to the answers from the questionnaire survey, eleven of them understood 80% of the contents of the training and five of them understood 50%.

(3) Efficiency

The lecturers had enough experiences on electrical measurement standards and calibration, and about 70% of participants highly evaluated them. Some of the participants mentioned that the dispatched lecturers from JICA needed an Arabic translator, but they had enough knowledge and experience. Some participants indicated the "training for a day lasted too long" or "textbooks and equipments were old."

(4) Impact

Participants specialized in the field were able to improve the knowledge and techniques through the training, apply the attained techniques and attempt to share the acquired knowledge among colleagues after returning to their home countries. Unspecialized participants realized the importance of the field through the training and could improve their knowledge.

(5) Sustainability

The NSCL was interested in the training and considered to allocate the budget to support the training. The NSCL has high-level techniques in the field and had enough equipment. Therefore, they can implement the training independently in the future. However, the budget is not abundant, and they require the support and cooperation from JICA in order to accomplish the purpose of the training of regional cooperation in the field of Electrical Measurement.

3-2 Factors that promoted realization of effects

(1) Factors Concerning the Planning

N/A.

(2) Factors concerning the Implementation Process

- 1) As the resumes of lectures were distributed to all the participants in advance, the participants were able to understand the lectures more.
- 2) The contents of the course were improved. The unnecessary lectures were replaced with necessary and important lectures in the final year of the training.
- 3) The contents of the fieldwork and the technical visit to study related fields were beneficial to the participants, and they helped the ex-participants at their workplaces.

3-3 Factors that impeded realization of effects

(1) Factors Concerning the Planning

N/A.

(2) Factors concerning the Implementation Process

- 1) Some of the laboratory practices were implemented in a short time, and theoretical information was not offered sufficiently.
- 2) The participants of the last project wished to visit all the laboratories but could not, which hampered the realization of the training effects.
- 3) As the recommendations in the past training were not reflected in the following training, the participants made the request to realize those recommendations.

3-4 Conclusion

The Training was successful as a whole. It became the first step to promote the cooperation between Syria and Japan, and furthermore to establish the electrical measurement standard in Arabic countries for the future.

3-5 Recommendations

(1) It is recommended to select the participants putting into consideration their specialized skills and levels so that the understanding of the participants will not be varied.

(2) It is recommended for the Syrian side to increase the rate of financial support to the training cost which the Syrian side provides 15% at present.

(3) There was a language problem for specialists and lecturers. It is recommended that the lecturers gain the ability to speak English clearly, and also utilize the services of Arabic interpreters /translators.

(4) It is recommended that the training materials be delivered to the participants in advance on CD-ROM considering the portability.

3-6 Lessons Learned

(1) It is necessary for the research institutes, the organizations that dispatch the trainees, and the participating governments to consider the specialties of the applicants and to select the participants carefully as the levels of understanding differ depending on the specialties of the applicants.

(2) It is necessary that the subjects of the training program should be selected elaborately by an implementing organization so that the subjects suit all the participants.

(3) It is necessary to introduce daily evaluation for improving the contents of training

3-7 Follow-up Situation

The government of Syria requested the government of Japan for the extension of the third-country training program with the aims to transfer techniques on the electrical measurement standard and calibration of weight and pressure to its neighboring countries. The Japanese side will start considering whether it is necessary to extend the cooperation period in the near future.