

Terminal Evaluation

Asia

1. Outline of the Project

Country:

Malaysia

Project title:

The Project on Risk Management of Hazardous Chemical Substances

Field:

Environment

Cooperation scheme:

Project-type Technical Cooperation

Division in charge:

Second Technical Cooperation Division, Mining and Industrial Development Cooperation Department

Total cost:

569 million Yen

Period of Cooperation

1 April 1998 - 31 March 2002

Partner Country's Implementing Organization:

Environmental and Energy Technology Center, SIRIM Berhad(SIRIM)

Supporting Organization in Japan:

Chemical Management Policy Division, Manufacturing Industries Bureau, Ministry of Economy, Trade and Industry

Related Cooperation:

Project-type Technical Cooperation; "Hazardous Chemical Substance Evaluation Analysis/ Industrial Waste Disposal Technical Cooperation Project (Phase 1)"

1-1 Background of the Project

Along with the rapid growth of the economy, the quantity of chemicals consumed and the variety of chemical substances comprising product ingredients have also rapidly increased in Malaysia. This also applies for hazardous chemical substances. However, the preparation of standards and measures for regulation and control lag behind. Additionally, the country needed to promptly implement countermeasures for the disposal of industrial waste.

In response, JICA had implemented and completed the Project-type Technical Cooperation "Hazardous Chemical Substance Evaluation Analysis/Industrial Waste Disposal Technical Cooperation Project" from 1993 - 1997. However, this Project was aimed at developing basic technology and knowledge through technical transfer at the laboratory level. Therefore, Malaysia requested the cooperation in order to manage and control industrial pollution, applying the outputs gained from the former Project in actual industrial activity.

SIRIM Berhad (SIRIM) is a public corporation wholly owned by the Government of Malaysia. SIRIM plays the central role in the country as a research institution of industrial technology.

1-2 Project Overview

To provide the industrial sector with evaluation and management services for the safe use of chemical substances, the Project transferred the necessary techniques to SIRIM, such as techniques for the assessment and disposal of waste water.

(1) Overall Goal

SIRIM's capacity in risk assessment of hazardous chemicals will be upgraded.

(2) Project Purpose

SIRIM will be able to provide evaluation and management services in chemical safety for the industrial sector.

(3) Outputs

- 1) The management system of the Project will be established.
- 2) The equipment will be procured, operated and maintained properly.
- 3) Technical expertise in chemical safety evaluation will be developed.
- 4) Technical expertise in the treatment of waste waters containing color and nitrogen will be developed.
- 5) The expertise developed will be disseminated across industries.
- 6) Information on evaluation and treatment of chemical substances will be disseminated.

(4) Input

Japanese side:

Long-term Experts	7	Equipment	131 million yen
Short-term Experts	27	Local Cost	20 million yen
Trainees received	13		

Malaysian side:

Counterparts	17		
Equipment		275,000RM (10 million yen)	
Local Cost		1,698,000 RM (50 million Yen)	

2. Evaluation Team

Members of Evaluation Team

Leader: Kojiro MATSUMOTO, Deputy Director, Second Technical Cooperation Division, Mining and Industrial Development Cooperation Department, JICA
Technical Cooperation Planning: Takeru NUMADATE, Assistant Chief, Chemical Management Policy Division, Manufacturing Industries Bureau, Ministry of Economy, Trade and Industry
Technical Transfer Planning: Chisumi ETO, Section Chief, Chemical Assessment Center, Chemicals Evaluation and Research Institute, Japan
Evaluation Management: Kenichi KAWAMURA, Second Technical Cooperation Division, Mining and Industrial Development Cooperation Department
Evaluation Analysis: Masayuki TAKASAWA, RECS International Inc.

Period of Evaluation

7 October 2001 - 20
October 2001

Type of Evaluation:

Terminal Evaluation

3. Results of Evaluation

3-1 Summary of Evaluation Results

(1) Relevance

The Government of Malaysia has continuously regarded proper environmental management as important in the 8th Malaysia Plan (2001-2005). Though the Project was planned with the enactment of an industrial chemical substance law in mind which implements overall regulations and management regarding hazardous chemical substances, it was not enacted at the time of Terminal Evaluation. However, the Government of Malaysia has strengthened the management of hazardous chemical substances on the grounds of the current law, such as making the risk assessment of the labor environment an obligation under the Occupational Safety and Health Act. If a unified legal framework for the hazardous chemical substances is prepared in the future, the needs of risk management will increase in the industrial sector especially in small and medium sized enterprises. For these reasons, the implementation of the Project is relevant to the policy of Malaysia.

(2) Effectiveness

The counterparts have acquired the principle, concept, and techniques of risk assessment of hazardous chemical substances. They have developed various manuals and assessment guides for the field of waste water treatment. At the same time, they have actually implemented risk assessment of hazardous chemical substances, and are expected to complete a research report. Judging from the achievement of the outputs, the Project Purpose; "SIRIM will be able to provide evaluation and management service", will be attained by the end of the cooperation.

(4) Efficiency

Due to the delay in the transportation of equipment and the construction of laboratories, the Project activities were delayed to some extent as well. There were requests mainly from the Malaysian side to extend the dispatch period of experts because only a few Short-term Experts were dispatched. Especially for the fields of ecology toxicity testing and waste water treatment, for which Long-term Experts were not dispatched, it is considered that there should have been more careful discussion on the timing and the period of the expert dispatch.

(4) Impact

SIRIM has widened the coverage of consultancy services in the field of waste water disposal and chemical safety evaluation during the Project period. Moreover, one of the counterparts in the field of risk assessment acquired the assessor license of the Malaysia Department of Occupational Safety and Health (DOSH). This made it possible for the assessor to enter companies and implement the risk assessment on the impact of chemical substances on health. Furthermore, because the transferred techniques could be practically used in fields other than risk management, SIRIM has become able to satisfy to the various needs of the industry and strengthened the business service system. As mentioned above, it is evaluated that the Project has been steadily moving forward to achieve the overall goal, "upgrading capacity in risk assessment".

The 8th Malaysia Project recognizes SIRIM as a necessary institution for the pursuit of industrial environmental management. Especially, the small and medium sized enterprises that have not attained sufficient technology for environmental management, have evaluated SIRIM as an important institution. It is confirmed that the Project contributed to elevating the status of SIRIM.

(5) Sustainability

SIRIM has established a management system that responds to the expectations of industry to provide risk assessment as well as consultation services. In order to widen the coverage of consulting services, a good relationship with various institutions has been established. In terms of organization, three counterparts are playing an important role as managers, and SIRIM has taken steps that will enable them to continue in their activities. In terms of institution, the Project was planned with the industrial chemical substance law prepared by the Ministry of Science, Technology and the Environment in mind. However, enactment of the law was still pending at the time of terminal evaluation due to problems concerning adjustments in the current law.

Nevertheless, the Malaysian side has not changed its recognition of the importance of the enactment of the law. In the mean time, they will promote the management of chemical substances on the grounds of the current law. Although overall risk assessment is not being conducted yet, it is evaluated that the importance of the practical use of the techniques still remains high.

In terms of techniques, most of the counterparts attained a sufficient level of expertise. In the field of ecology toxicity testing and waste disposal, the counterparts have attained a level of technology to maintain and further expand their activities.

In terms of the finances, SIRIM is widening the scope of research field activities, and it can be said that the SIRUM will not face difficulty in increasing income through research contracts.

3-2 Factors that promoted realizing effects

(1) Factors that concern planning

N/A.

(2) Factors concerning the Implementation Process

The Counterparts had participated in the "Hazardous Chemical Substance Evaluation Analysis/ Industrial Waste Disposal Technical Cooperation Project", the previous Project, and the equipment of the previous Project was also used, contributing to the efficient implementation of the project.

3-3 Factors that impeded the effects

(1) Factors that concern planning

N/A

(2) Factors that concern the implementation process

The delay in laboratory construction delayed Project progress.

3-4 Conclusion

It is concluded that providing evaluation and management services for chemical substance safety, which was the Project Purpose, has been achieved. Upgrading of capacity in risk assessment of hazardous chemicals, which was the Overall Goal is steadily progressing. There are no problems in terms of institutional, technical, and financial sustainability, and the Project effect is expected to be maintained.

3-5 Recommendations

(1) There are no problems in the contents of technical transfer in the field of mutagenicity testing. However, the counterparts have not been able to use the techniques with confidence, and it is necessary to dispatch Short-term Experts in the same field so that the counterparts will be able to acquire sufficient evaluation techniques by the end of the Project period.

(2) The Project should take some measures to provide more time for preparing a study report on at least one hazardous chemical substance by the end of the Project period.

3-6 Lessons Learned

(1) One of the most important tasks of the Project was to provide instruction in the methodology of risk assessment. However, this task was not included or explained at the beginning of the Project. The plan of the Project must be carefully designed at the preliminary stage.

(2) Laws and regulations strongly affect the Project plan and operation especially for a project concerning environmental policies. If the future details of the enactment of an environmental law are unclear, it is important to carefully consider the relevance of the Project, and whether or not the Project will meet the needs of the Government's environmental policy.

(3) Careful attention should be paid in the dispatch of Short-term Experts. Especially in fields where there is no plan to dispatch Long-term Experts, it is important to fully examine the details of Inputs, such as the number, specialty and timing of the expert dispatch, in order to achieve the outputs.

3-7 Follow-up Situation

N/A.