

Summary Report of the Evaluation

1. Outline of the Project	
Country: Republic of Indonesia	Project Name: Coal Mining Technology Enhancement Project at BDTBT
Sector: Mining	Cooperation Type : Project-Type Technical Cooperation
Competent Division : Natural Resources and Energy Conservation Team, Group II, Economic Development Department	Cooperation Amount: Approximately 770 million yen
Cooperation Period	(R/D): 2001.4.1 – 2006.3.31
	(Extension): —
	(F/U): —
	(E/N)(Grant Aid)
Implementing Organization: The Education and Training Agency for Energy and Mineral Resources Cooperation Agency: JICA Related Cooperation: NEDO	
<u>1-1 Background and Outline of the Cooperation</u>	
<p>Although almost Indonesian coal mines are operating with the open-cut mining methods, the underground operations are forecast to increase in future. Based on this forecast, JICA carried out "The Master Plan Study On The Human Resource Development for Coal Production Increase in Republic of Indonesia" from 1996 to 1997. According to the result of the Study, it is estimated that the coal production from the underground mines will increase gradually, and underground manpower will increase inevitably. In response to the investigation result, the Indonesian Government requested the project-type technical cooperation for Coal Mining Enhancement Project from Japan. In April 2001, JICA started this Project that has been managed for five years.</p>	
<u>1-2 Details of the Cooperation</u>	
(1) Overall Goal	
Underground coal mining technology is enhanced in the Republic of Indonesia. (The technologies transferred to BDTBT are utilized effectively for management (supervision, inspection), operation and planning of the underground coal mines in Indonesia.)	
(2) Project Purpose	
BDTBT is able to train coal underground mining supervisors and technicians, and mine inspectors	
(3) Output	
1. Administrative system of the project is established.	
2. Operation and maintenance system of machinery and equipment of the project is established by Counterparts.	
3. Preparation for implementation of the five (5) courses by Counterpart is completed.	
4. The five (5) courses are being implemented at BDTBT	
5. The usefulness of the courses implemented at BDTBT is known by the mining companies and organizations related to mining in Indonesia.	

(4) Input(actual result)			
Japanese Side			
Long-term Experts	5 persons	Provision of Equipment	About 300 × 10 ⁶ Yen
Short-term Experts	34 persons		
C/P Training in Japan	14 persons		
Indonesian Side:			
Counterparts	30 persons	Local Cost	Mil. Rp. 15.616

2. The Evaluation Team

Members (Field in Charge: Name: Employment/Title)

Leader	Mr. Shinji Totsuka	Deputy Resident Representative, Indonesia Office, JICA
Mining Policy	Mr. Atsuhiko Kurihara	Assistant Director, Coal Division, Natural Resources and
Project	Mr. Gen Kojima	Fuel Department Agency For Natural Resources and
Management		Energy Natural Resources and Energy Conservation
Planning for the	Mr. Hirofumi Furukawa	Team, Group II, Economic Development Department,
Tech. transfer		JICA General manager, Resources Department, Japan
Evaluation	Mr. Kenichi Kumagai	Coal Energy Center Executive Director, International
Analysis		Consulting Services Co., Ltd.

Period of Evaluation	From November 28 to December 15, 2005	Evaluation Stage: Final
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3. Outline of the Evaluation

3-1 Project Performance

3-2 Summary of the Evaluation

(1) Relevance

The relevance is high.

The Indonesian energy policy that stated coal as an alternative energy resources to the oil which being depleted and to remain as export commodity to gain the foreign currency, has not been changed from the beginning of Project (for five years).

According to the National Coal Policy, the improvement of ability on underground mining techniques and promotion of the economic underground mining are the key issues of the coal development, and the Quantitative indicator of national coal production is presented. Therefore the expectation of the Indonesian Government to develop the underground mining technology, as the purpose of the Project is significant.

(2) Effectiveness

The Effectiveness is high.

The management system of the Project was established. The Senior C/Ps have acquired how to use and maintain the equipment and the technology in each field. Starting 2002 they carried out the training for mine supervisors and technicians, and mine inspectors. Moreover Senior C/Ps are able to manage the training. Consequently, the Project Purpose will be achieved. In addition, the alumni evaluated that the training was useful.

(3) Efficiency

The efficiency is relatively high.

The timing of C/P allocation is adequate, and the qualities of the C/Ps and Experts are excellent; the C/Ps

and Experts have been coped with their subjects of the Project seriously. The provided equipments are suitable both in quality and quantity, and almost all of the equipments have been fully utilized in the Project.

In addition, Indonesian side increased number of C/P, built and improved the facilities to make provision for future intensively. The factors above-mentioned contribute to the achievement of the Output.

On the contrary, at the beginning of the Project, the problem with the withdrawal of C/Ps from the Project occurred. Other problems were the change of the plans for training and technology transfer, and the cancellation of training caused by delay of budget approval until 2004. These problems decrease the Project efficiency slightly. The changes of C/Ps also decrease the Project efficiency slightly.

(4) Impact

The positive impact is big.

The mine supervisors, technicians, and mine inspectors who completed BDTBT training still working for the job related to mining in same organization, they have utilized and transferred to their colleagues the technology acquired at the BDTBT. Hence it is evaluated that the technology of BDTBT is going to take root in Indonesia.

In addition, the mining engineers who work near the Project have joined the BDTBT activities other than training; the D 3 Program of Mining Engineering of Padang University and its Sawahlunto Campus is carried out at BDTBT, as a part of practice. The students of other universities come to the BDTBT for field visit.

Furthermore gold mines and universities other than those above made the request to the BDTBT for the training. The coal mines asked the BDTBT for the chemical analysis including sulphur.

And the 400 persons related to mining attended seminar on technology for mine development held at the BDTBT. Thus the interest of the persons related to the mining in the training at the BDTBT and underground mining are getting to rise. The negative impact has not appeared.

(5) Sustainability

The Sustainability of the Project is high. However the special training for underground coal mining technology can be seriously affected by the external factor (i.e. schedule of underground mine development). Therefore the proper management in line with the development of mining sector and strengthening of the financial support are required.

The activities to achieve the Project Purpose have been already evolved, and the future status of the BDTBT after the end of the Project is fixed and will be supported by the government and stakeholder. The mining companies (especially located in Sumatra), and Dinas Pertambangan in the province and in the cities/districts expect the training program at the BDTBT as a part of training means for their employee. While the universities expected the BDTBT as the training center for their students to do practical assignment.

Regarding the financial support other than from the government, the onerous trainings for the employees of mining companies can be created. Also the possibility of utilizing the existing laboratory facilities has been discussed.

With respect to the external factor, the development of the underground coal mine have increased gradually. However, it is difficult to predict when the full-scale and nationwide scale of development of the mines will be evolved, because it will be depend on various economical factors such as mining conditions, infrastructure, coal price, investment, etc. However the BDTBT shows the direction, for it future status. They have to provide the technology (not limited to the underground mining technology) which meet the needs.

3-3 Conclusions

The Project Purpose will be achieved. The long – term plan aiming the Sustainable development has been discussed, and proceed to the achievement of the Overall Goal.

The Sustainability of the Project is high, the Project tend to be affected by external factor easily. Accordingly it is important for BDTBT to manage the training seriously in line with the needs of mining industries to maintain the organization, and to make the effort to upgrade the underground technologies.

3-4 Recommendations

1. Settling of the regular technology exchange forum with domestic coal mines in order to upgrade the trainers are desirable.
2. Dispatching the trainers to the relevant international mining conference is desirable. The methodology of communication between C/Ps and Japanese engineers and lecturers also should be discussed
3. Settling of regular meeting (both multilateral and bilateral) with mining companies, Dinas Pertambangan, and Universities to discuss training needs is desirable.
4. Before being promoted or rotated from BDTBT it is recommended that the trainers should have the degree of acquisition for the underground mining technology.

3-5 Lesson learned

1. In case of facing any social and economical crisis, the project activities should be revised as soon as possible based on circumstance and the parties needs as stipulated in the training need survey.
2. The promotion activity carried out by the Project, in a manner of visiting stakeholder has increased the interest of the stakeholder on the Project significantly. This method shall be of reference to the other projects.