

# Terminal Evaluation

## Middle East

### 1. Outline of the Project

**Country:**

Jordan

**Project title:**

The Project for Rehabilitation of Equipment for Central Workshop of Road Construction and Maintenance Machinery

**Issue/Sector:**

Roads

**Cooperation scheme:**

Grant Aid

**Division in charge:**

Project Monitoring and Coordination Division,  
Grant Aid Management Department

**Total cost:**

E/N amount 513 Million Yen

**Period of  
Cooperation**

Fiscal Year 1998

**Partner Country's Implementing Organization:**

Ministry of Public Works and Housing (MPWH)

**Supporting Organization in Japan:****Related Cooperation:**

Expert Dispatch "Roads Workshop"

### 1-1 Background of the Project

Jordan needed to improve its road network for further economic expansion because, with over 40 percent of exports and imports transported over land, road transport is the main mode of logistics; Because of this, the Government of Jordan has built, expanded and improved roads and their maintenance.

The Ministry of Public Works and Housing (MPWH) was in charge of routine maintenance. Along with improvement of the road network, the number of roads added to the maintenance schedule was extended year by year. But, the workshop's equipment and machinery for road construction and maintenance were built about 50 years ago, the facilities had not been regularly updated and this, in turn, resulted in poor-road maintenance and improvement. It also resulted in a high rate of equipment downtime and a short equipment life cycle which, again, lowered the road operation and maintenance capacity of MPWH.

Under these circumstances, the Government of Jordan developed the "The Project for rehabilitation of Equipment for the Central Workshop of Road Construction and Maintenance Machinery" and requested the Government of Japan to provide Grant Aid to procure and install the equipment in upon relocation of the workshop from the capital of Amman to a new workshop and maintenance yards in the suburban city of Al-Zarqa.

### 1-2 Project Overview

To improve the road operation and maintenance capacity of MPWH, the Project implemented Grant Aid for the Government of Jordan's procurement and renewal and operation of machinery maintenance workshop facilities built in Al-Zarqa.

#### (1) Overall Goal

MPWH enhances its business management capability on road maintenance.

#### (2) Project Purpose

Equipment of the Central Workshop of Road Construction and Maintenance Machinery which move from Amman to Al-Zarqa (42 km north east from Amman) is improved.

### (3) Outputs

The following equipment is improve:

- 1) Repair equipment for machinery and vehicles (test machines for engine performance, hydraulic cylinder stand, tire repair machine, washing machine, etc.).
- 2) Machine tool for parts manufacturing (crankshaft grinder, turning machine, tools and others).
- 3) Workshop facilities and supporting machines (overhead crane hoist, mobile repair machine, forklift, etc.).

### (4) Inputs

Japanese side:

513 Million Yen (Maximum for E/N donation)

Jordanian side:

construction of new maintenance workshop

## 2. Evaluation Team

<b>Members of Evaluation Team</b>	Team Leader/General: Satoshi IWAKIRI, Senior Assistant for Grant Aid, Grant Aid Division, Economic Cooperation Bureau, The Ministry of Foreign Affairs of Japan Equipment Management Survey: Hidetaka SAKABE, Third Project Management Division, Grant Aid Management Department, JICA Supply Management Survey: Takefumi MAYUMI, Japan International Cooperation System
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<b>Period of Evaluation</b>	14 April 2001 - 24 April 2001	<b>Type of Evaluation:</b>	Terminal Evaluation
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## 3. Results of Evaluation

### 3-1 Summary of Evaluation Results

#### (1) Relevance

The transportation sector represented 10 percent of the working population and 14 percent of the GNP of Jordan. The location of Jordan connects the east Mediterranean areas and Gulf areas. Therefore, the Government of Jordan put importance on the expansion of the transportation sector for the further expansion of the regional economy utilizing its geographical advantage. Thus, the priority to develop the main roads was high. The Project supported the road construction and maintenance activities in Jordan and was consistent with the overall plan of Jordan. Therefore, the Project has high relevancy.

#### (2) Effectiveness

The improvement of facilities and equipment were conducted as planned. Before Project implementation, one forth of the 680 road construction machines and vehicles were awaiting repair. At the evaluation point, after the implementation of the Project, 79 machines and vehicles were repaired, and the main equipment was fully utilized.

As the JICA experts implemented the basic and advanced Training to the skilled workers during their stay, the techniques utilizing equipment were improved.

#### (3) Efficiency

There were no special problems during the Project and the equipment was appropriately delivered and installed.

#### (4) Impact

Because parts were produced in the maintenance workshop, about 30,000JD (5 Million Yen) in operation and maintenance fees was cut from expenditures such as outsourcing for repair and purchase of spare parts. In addition, the period of maintenance was shortened. By utilizing mobile repair car, the maintenance period and costs was also reduced. The Project contributed to the promotion of efficiency of the business implementing organization as a whole.

## (5) Sustainability

As development and maintenance of the road network is a major issue for further expansion of the economic activities in Jordan, about 15 percent of the national budget is allocated to roads. MPWH is in charge of routine maintenance of all roads and the construction of regional roads, and maintenance of the road construction machinery and vehicles of MPWH is still prioritized. Under the circumstances, the budget allocated to MPWH from the Central Government is increased yearly, and a sufficient budget for maintenance workshop operation is assured. Together with the cost reductions of Project implementation, financial sustainability will be ensured. As for the Personnel allocation, the number of the staff at the maintenance workshop is increasing as planned.

### 3-2 Factors that promoted realization of effects

#### (1) Factors concerning Planning

As the Project well understood the facility plan of the maintenance workshop that the Jordanian side developed, the appropriate kinds and quantity of equipment could be included in the Project plan.

#### (2) Factors concerning the Implementation Process

As the progress of construction of the maintenance workshop by the Jordanian side was one of the Project considerations, the delivery of equipment was timely.

### 3-3 Factors that impeded realization of effects

#### (1) Factors concerning Planning

N/A

#### (2) Factors concerning the Implementation Process

N/A

### 3-4 Conclusion

The equipment provided by the Project was well utilized and the road maintenance and construction capacity of the implementing organization have improved. There were financial positive impacts such as the operation and maintenance expenditure reduction.

### 3-5 Recommendations

The Project aimed to repair and develop the road construction machinery and vehicles. To reduce the breakdown of equipment, it will be useful to implement the training on the operation of machinery and vehicles.

### 3-6 Lessons Learned

In the case where the construction of a facility by a counterpart country is an important assumption, it is important in terms of the realization of effects of the Project to assure a steady budget from the recipient country and to construct the facility on schedule. The Project can be a model project in which the recipient country is responsible for the construction of facility and the Japanese side is responsible for provision of equipment and dispatch of experts.

### 3-7 Follow-up Situation

Follow-up was not necessary.