

Country Name	The Project for Improvement of the Equipment for Road Maintenance
Bosnia and Herzegovina	

### I. Project Outline

Project Cost	E/N Grant Limit: 844 million yen	Contract Amount: 843 million yen
E/N Date	September, 2007	
Completion Date	January, 2009	
Implementing Agency	CESTE d.d. Mostar (CESTE)	
Related Studies	Basic Design Study: February, 2006 – March, 2007	
Contracted Agencies	Consultant	Katahira & Engineers International
	Contractor	-
	Supplier	ITOCHU Corporation
Related Projects	-	
Background	<p>The road traffic was the main system of the transportation in Bosnia and Herzegovina. After the conflict from 1992 to 1995, the financial resources were mainly allocated for the recovery and reconstruction works on the collapsed roads and bridges. Although importance was recognized, road maintenance works for the existing roads were insufficient because of the lack of the budget of road sector. As the result, generally pavement of the road in the country was aging, and deterioration of the surface was being faster.</p> <p>CESTE d.d. Mostar (CESTE) was in charge of regular road maintenance work on the 15 routes of main road and 30 routes of regional road, total length 1,617km, located in the 5 cantons where many ethnic Croats live. The equipment owned by CESTE was significantly insufficient. Many of those were aging and working with low operation rate. CESTE faced difficulty of executing their work on a timely fashion.</p>	
	<p><b>Outcome</b></p> <p>To ensure the proper road maintenance in five cantons: Posavina, Central Bosnia, Herzegovina Neretva, West Herzegovina, Canton 10 (Herzeg Bosna) by procuring equipment for road maintenance for CESTE which undertakes maintenance works for roads in the five cantons.</p> <p><b>Outputs</b></p> <p>Japanese Side:</p> <ul style="list-style-type: none"> <li>Procurement of equipment of 17 items for road maintenance of 15 routes of main road and 30 routes of regional road, total length 1,617km, located in the 5 cantons including: Motor grader, Dump truck, Asphalt finisher, Asphalt milling machine, Asphalt sprayer, Truck, Concrete cutter, Multi purpose vehicle, Wheel backhoe, Backhoe loader, Vibration roller, Wheel loader, Truck with crane, Line marker, Pile driver (Self-propelled), Crack filler, and Mobile workshop truck.</li> </ul> <p>Bosnia and Herzegovina side</p> <ul style="list-style-type: none"> <li>Ensuring prompt forwarding the equipment to base point of each canton office from the delivery site.</li> </ul>	
Project Objectives		

### II. Result of the Evaluation

Summary of the Evaluation
<p>The road traffic was the main system of the transportation in Bosnia and Herzegovina. Financial resources were mainly allocated for the recovery and reconstruction works on the roads and bridges collapsed during the conflict. Road maintenance works for the existing roads were insufficient because of the lack of the budget of road sector. As the result, generally pavement of the road in the country was aging, and deterioration of the surface was being faster.</p> <p>This project has somewhat achieved its objectives of ensuring the proper maintenance of the target roads in terms of “overlay with milling machine”. With respect to “surface milling for anti-slip”, although the project fails to achieve the target at the time of ex-post evaluation due to the delay in budget disbursement of the federal government, the contractee, CESTE is expected to achieve the target in 2012. However, in terms of “reshaping of rock slope”, the project failed to achieve the target because the number of contracts awarded have decreased due to the competition with private companies. Regarding impact, the service life of the target roads is expected to be extended for 10 years by the prevention of deterioration with the quick work of repairing the damages with the equipment provided by the project. As for sustainability, there was no problem observed in the project because the implementing agency has sufficient operators, no technical problems, and positive cash flow although there is a loss on the profit and loss statement due to the depreciation of the equipment. Besides, the implementing agency keeps log of equipment use and carries out maintenance properly.</p> <p>For relevance, the project has been highly relevant with development policy and needs of Bosnia and Herzegovina as well as Japan’s ODA policy at the time of both ex-ante and ex-post evaluation. For efficiency, the project period slightly exceeded the plan.</p> <p>In the light of the above, this project is evaluated to be satisfactory.</p>

#### 1 Relevance

<p>This project has been highly relevant with development policy of Bosnia and Herzegovina “Strengthening and modernization of transportation network as set in the Mid-term Development Strategy 2004-2007 and Country Development</p>
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Strategy (in draft: Approval has been delayed due to the delay in cabinet formation after the national election), country's development needs "Improvement and equalization of quality in road maintenance", as well as Japan's ODA policy at the time of both ex-ante and ex-post evaluation.

Therefore, relevance of this project is high.

## 2 Effectiveness/Impact

This project has somewhat achieved its objectives of ensuring the proper maintenance of the target roads in terms of "overlay with milling machine". With respect to "surface milling for anti-slip", although the project achieved the target in the target year (2009), it failed to achieve the target at the time of ex-post evaluation (Actual figure in 2011) due to the delay in budget disbursement of the federal government, the contractee. However, CESTE is expected to achieve the target in 2012. According to interviews with road users of the target roads in the five cantons such as transport companies and bus companies, the road conditions have significantly improved after the project completion. Furthermore, the subcontract expense has been curtailed thanks to the provided equipment which enable CESTE to perform all of their own maintenance work. However, in terms of "reshaping of rock slope", the project fails to achieve the target because of the competition with the other companies. When the project was requested, as a government corporation, CESTE were able to win contracts exclusively for maintenance work in specific roads. However, the principle of competition for the efficient procurement was introduced in 2008 and as a result, CESTE were no longer able to win contracts exclusively. The change of the procurement policy influenced CESTE's number of contracts for reshaping of rock slope immediately, since the contract were awarded on ad-hoc basis. On the other hand, CESTE won the contract for comprehensive road maintenance package which includes overlay with milling machine and surface milling for anti-slip until March 2013, the volume of these two works will be unchanged for the time being. Nonetheless, CESTE may compete with other companies in these respects as well in the future.

As to impact, according to interviews with the implementing agency, the service life of the target roads is expected to be extended for 10 years by the prevention of deterioration with the quickly work of repairing the damages with the equipment provided by the project. The equipment were procured in accordance with the environmental standard of European Union, therefore, adverse effect of emission from engines on natural environment is mitigated.

Therefore, effectiveness/impact of this project is fair.

### Quantitative Effects

	2005 Actual (BD)	2009 Planned	2009 Actual	2011 Actual
Indicator 1: Overlay with milling machine	2,540ton	6,000~7,000ton	7,200 ton	7,099 ton
Indicator 2: Surface milling for anti-slip	13,000m <sup>2</sup>	227,000m <sup>2</sup>	276,000 m <sup>2</sup>	26,000 m <sup>2</sup>
Indicator 3: Reshaping of rock slope	3,000m <sup>3</sup>	520,000m <sup>3</sup>	1,850 m <sup>3</sup>	1,047 m <sup>3</sup>

(Source) CESTE d.d. Mosta

## 3 Efficiency

Although the project cost was as planned (ratio against the plan: 100%), the project period slightly exceeded the plan (ratio against the plan: 119%) because of the delay in manufacturing and transportation of some equipment. Outputs were produced as planned.

Therefore, efficiency of the project is fair.

## 4 Sustainability

The equipment provided by the project are maintained by CESTE, the implementing agency who carries out proper maintenance with the equipment. CESTE has no technical problem because there are sufficient operators who have been working for CESTE for years and take part in regular training. In terms of financial aspect, though CESTE has to compete with private companies, it still secures certain number of contracts from the federal and canton governments and therefore maintains a certain revenue level. Although CESTE generates a loss on its profit loss statement due to the depreciation of equipment, it has positive cash flow and no problem on its capital-to-asset ratio. On the current status of operation and maintenance, the implementing agency keeps log of equipment use and carries out maintenance properly.

As stated above, since the project has no problem in institutional, technical and financial aspects as well as the current status of operation and maintenance, sustainability of the project effect is high.

## III. Recommendations & Lessons Learned

### Recommendations for implementing agency:

The number of contracts of the implementing agency is partly dependent on the status budget disbursement by the federal and canton governments. However, in order to win contracts stable, the implementing agency should improve its productivity and cost competitiveness.

### Lessons Learned to JICA

When the project was requested, as a government corporation, CESTE were able to win contracts exclusively for maintenance work in specific roads. However, the principle of competition for the efficient procurement was introduced in 2008 and as a result, CESTE were no longer able to win contracts exclusively. Even though an implementing agency is a government corporation, JICA needs to consider the possibility that business environment may change in the future which influences performance of the implementing agency.



A motor grader



Reinforcement work of shoulder