

## Simplified Ex-Post Evaluation for Grant Aid Project

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| Evaluator, Affiliation | Akihiro Nakagome, Shiro Otomo<br>Ernst & Young Advisory Co., Ltd.  | Duration of Evaluation Study  |
| Project Name           | The Project for Improving the Quality of Products and Increasing the Competitiveness of the Industrial Sector in the Hashemite Kingdom of Jordan | February 2010 – December 2010 |

### I Project Outline

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| Country Name              | Hashemite Kingdom of Jordan  |                                      |
| Project Period            | September 2004-April 2006  |                                      |
| Executing Agency          | The Royal Scientific Society (RSS)   |                                      |
| Project Cost              | Grant Limit: 903 million yen   | Actual Grant Amount: 903 million yen |
| Main Contractors          | Sirius Corporation   |                                      |
| Main Consultants          | Unico International Corporation  |                                      |
| Basic Design              | The Basic Design Study on the Project for Improving the Quality of Products and Increasing the Competitiveness of the Industrial Sector in the Hashemite Kingdom of Jordan, JICA, July 2004  |                                      |
| Related Projects (if any) | JICA, <Technical Cooperation> Information Technology Upgrading Project (1999-2002), <Grant Aid> The Project for Improvement of Monitoring Equipment for Water Pollution (2001), <Senior Volunteer Programme> Heat Treatment, Corrosion/Protection Testing, Tyres Testing, Mold Design, etc. (1996-)  |                                      |
| Project Background        | The Hashemite Kingdom of Jordan was working to achieve further economic growth through attraction of foreign investment and promotion of free trade. As a result, competition in industrial products had intensified both export and domestic markets, and the need had been increasing for quality control of industrial products as a means of increasing their competitiveness. Jordan was carrying out a variety of efforts to increase its competitiveness through improving the quality of its products, including technical and financial support for enterprises, encouraging acquisition of ISO 9001 certification, and policies for the establishment of a system for certification of testing facilities at an international level. As part of these efforts, this project was intended to improve the calibration and quality-testing service functions of the Royal Scientific Society through providing it with calibration and testing equipment. |                                      |
| Project Objective         | The objective of the project is to improve the calibration service and quality-testing service functions of the Royal Scientific Society of Jordan through providing it with equipment for calibration and for quality testing of industrial products.   |                                      |
| Output[s] (Japanese Side) | <ol style="list-style-type: none"> <li>1. Equipment for Calibration (National Calibration Laboratory, in Electronic Service and Training Center)</li> <li>2. Equipment for testing               <ol style="list-style-type: none"> <li>1) Equipment for Electronic Service and Training Center</li> <li>2) Equipment for Mechanical Design and Technology Center</li> <li>3) Equipment for the Industrial Chemistry Center</li> <li>4) Equipment for the Building Research Center</li> <li>5) Equipment for the Environmental Research Center</li> </ol> </li> </ol>  |                                      |

### II Result of the Evaluation

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| Summary of the evaluation   |
| <p>This project has been highly relevant with Jordan's National Social &amp; Economic Action Plan, needs for improving competitiveness of industrial products, as well as Japan's ODA policy; therefore its relevance is high. Although project period exceeded the plan, it was due to adjustment of schedule for avoiding Ramadan and project cost was as planned; therefore, the efficiency of the project is fair. Moreover, equipment for calibration and for quality testing of industrial products were procured as planned. Regarding effectiveness of the project, the equipment is in use at each relevant RSS center. RSS is now expanding the scope of services and increasing the amount of services. Because it now is possible to increase the precision of testing and measurement and RSS has made efforts to increase the efficiency of operations through updating equipment to computerized and automated technologies, and the content and quality can be said to represent an improvement.</p> <p>The RSS plays a primary role among neighboring countries in the region. For example, it provides calibration services to these countries and implementing training for engineers in related sectors. The RSS has secured international certification and is recognized internationally as a testing and certification agency. As such, mutual recognition between Jordan and other neighboring countries has been promoted.</p> <p>As for operation and maintenance as well, the necessary personnel have been secured, and training on operation and maintenance of the equipment has been conducted with no particular problems arising.</p> <p>In light of the above, this project is evaluated to be highly satisfactory.</p> |

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| 1 Relevance  |
| <p>(1) Relevance with the Development Plan of Jordan<br/> Jordan's National Social &amp; Economic Action Plan (2004-2006) called for measures to establish a system for certification of testing facilities at international level. This was consistent with the project objective, which was strengthening of testing institutions. The National Agenda (2006-2015) also identifies improvements in the quality and competitiveness of products in the industrial sector as a core territory, and this is consistent with the project.</p> <p>(2) Relevance with the Development Needs of Jordan<br/> To increase competitiveness of Jordan's industrial products in quality aspect, the need for quality control was increasing. Although the RSS was required to provide calibration services and quality-testing services, much of its equipment was old and lacking in terms of grade and quantity; thus, there was a need for improvements in calibration and testing equipment. Accordingly, it is recognized that there was a strong need for improvements in equipment.</p> <p>(3) Relevance with Japan's ODA Policy<br/> Japan's ODA policy for Jordan focused on the areas of basic living standards improvement, industrial promotion, and environmental conservation. In the area of industrial promotion, measures to support export industries such as human-resources development and financial cooperation were pointed out as measures to be taken. This project targeted improvement of equipment to support quality improvements in Jordan's products and quality testing in accordance with international standards; therefore it was consistent with Japan's ODA policy.</p> <p>This project has been highly relevant with the country's development plan, development needs, as well as Japan's ODA policy; therefore its relevance is high.</p>  |
| 2 Efficiency   |
| <p>(1) Project Outputs<br/> Despite some slight changes, outputs on the Japan side were for the most part in accordance with the plan.</p> <p>(2) Project Period (Project Inputs)<br/> The actual project period was 19 months, while the planned period was 11 months. As such, the actual period was significantly longer than planned (170% of the planned period). This delay was due to rebidding process as in the first bidding process all bidders were disqualified because of deviation from technical requirements. In addition rescheduling of installation and guidance on operation and maintenance in Jordan in order to avoid suspension of Eid Al-Fitr was another cause of the delay.</p> <p>(3) Project Cost (Project Inputs)<br/> The actual project cost was 902.7 million yen, while the planned cost was 903 million yen; the project cost was almost as planned (100% of planned cost).</p> <p>The project cost was mostly as planned. Although the project period was longer than planned due to rebidding process and adjusting the schedule by considering Ramadan. Though the countermeasures were appropriately taken with confirmation and agreement of the government of Jordan, rebidding process could be regarded as a factor of lowering efficiency; therefore, the efficiency of the project is fair.</p>  |
| 3 Effectiveness / Impact   |
| <p>(1) Quantitative Effects<br/> The total volume of the services rendered by the RSS rose from roughly 160,000 in 2002 to approximately 360,000 in FY2009 (for an increase of about 220%). Although no data could be obtained on the number of different kinds of calibration and testing services provided by the RSS, responses from the implementing agency indicate that the scope of testing has expanded and the RSS is now able to provide services in new areas such as food testing.</p> <p>(2) Qualitative Effects<br/> It can be said that the equipment procured in this project has increased quality of service as a result of increasing the measurement and testing precision of services. As approved by the Jordan Institute for Standards &amp; Metrology (JISM), the Jordan National Metrology Institute (JNMI), managed by the RSS, was established and began service provision. The JNMI can provide measurement services to various sectors in Jordan, and it contributes to improving product quality and cutting production costs for enterprises in Jordan.</p> <p>(3) Impacts (Impacts on the natural environment, Land Acquisition and Resettlement, Unintended Positive/Negative Impact)<br/> The RSS became an internationally recognized testing agency, certified under international standards. It utilizes the equipment procured in this project and invites engineers from nearby countries for training and other activities. It is thought that the RSS has established a firm position as an international facility that provides services and training to nearby nations based on the standards of each country. In the area of international mutual recognition, Jordan has concluded agreements with Kuwait, Iraq, and other countries and is in the process of negotiations with Arab nations.</p> <p>While the JISM had subcontracted testing and measurement of imported industrial products to private-sector certifying and testing agencies overseas, it no longer needs to do so with enhancement of the functions of the RSS.</p> <p>This project has largely achieved its objectives; therefore its effectiveness is high.</p> |
| 4 Sustainability   |

(1) Structural Aspects of Operation Maintenance

In the RSS, a section in charge of maintenance of equipment was set up, and staff in charge of operating the equipment have been assigned as well. In addition, maintenance personnel have been fulfilled as well.

(2) Technical Aspects of Operation Maintenance

Training is conducted for new staff on operation of equipment and on measurement, and the state of implementation of this training is subject to periodic auditing. The RSS has attained ISO 17025 certification, and there are no particular problems with regard to its satisfaction of management and technical requirements in regard to testing and calibration as a testing and calibration agency.

(3) Financial Aspects of Operation Maintenance

At the RSS's five centers with which the project provided equipment, revenues increased (by 144%) from JD 5.4 million (2006) to JD 7.8 million (2009), it achieves a budget surplus (recording a surplus of JD 2.9 million in 2009). Revenues are increasing for the RSS as a whole as well, and revenues and expenditures largely are in equilibrium. Each center also budgets for maintenance and spare parts. As a result, there are no particular problems.

(4) Current Status of Operation Maintenance

Maintenance for existing equipment is conducted properly. There have been no particular problems with the newly provided equipment in the project either. These are operated without any problems at each center and used at high frequency.

No major problems have been observed in the operation and maintenance system; therefore sustainability of the project effects is high.