

# Terminal Evaluation

## Latin America and the Caribbean

### 1. Outline of the Project

**Country:**

Paraguay

**Project title:**

The Project on Upgrading Verification and Inspection Technology in the Area of Mass

**Issue/Sector:**

Private Sector Development

**Cooperation scheme:**

Project-type Technical Cooperation

**Division in charge:**

First Technical Cooperation Division, Mining and Industrial Development Cooperation Department

**Total Cost (at terminal evaluation):**

approx. 475 million yen

**Period of Cooperation**

1 June 2000 - 31 May 2003

**Partner Country's Implementing Organization:**

National Institute of Technology and Standardization (INTN)

**Supporting Organization in Japan:**

Japan Quality Assurance Organization (JQA)

**Other Concerned Organization:**

National Institute of Advanced Industrial Science and Technology (AIST)

**Related Cooperation:****1-1 Background and Outline of the Project**

The Common Market of the South (MERCOSUR), which was organized in 1995, urged Paraguay to deal with the liberalization of trading within the South American region, and the improvement of quality and productivity for internationally recognized products and the testing technology necessary for Paraguay. It was required to achieve institutionalization of the quality inspection and establish an accreditation system conforming to the international system in order to upgrade the technical capacity in Paraguayan enterprises.

The National Institute of Technology and Standardization (INTN), which was the central organization for quality testing and certification system in Paraguay, currently promote their institutionalization. However, this effort was delayed comparing to other countries in MERCOSUR, due to the machinery and equipment that were too old for use and the lack of human resources and techniques.

In order to overcome this situation, the Paraguayan government requested Japan to implement a project for strengthening the testing and certification system especially in the area of Mass in November 1995. JICA dispatched an implementation study team and signed and exchanged the Record of Discussions on December 21, 1999. The project has been implemented from June 1, 2000 until May 31, 2003 for 3 years.

**1-2 Project Overview****(1) Overall Goal**

Credibility of INTN, as a verification and inspection institute, is increased in the area of Mass.

**(2) Project Purpose**

Verification and inspection services provided by INTN are upgraded in the area of Mass.

### (3) Outputs

- 1) The project operation unit is enhanced.
- 2) The necessary machinery and equipment are provided, installed, operated and maintained properly.
- 3) Technical level on verification and inspection of the counterpart is upgraded.
- 4) Verification and inspection services are performed systematically by INTN.

### (4) Inputs (at terminal evaluation)

Japanese side:

Long-term Experts	6 (2 by exchange)	Equipment	approx. 226 million yen
Short-term Experts	4 (2 will be added)	Local Cost	approx. 23 million yen
Trainees received	6		

Paraguayan Side:

Counterparts	4	Local Cost	approx. 2,049 million guaraní
Land, facilities and buildings	(approx. 265 thousand US\$, approx. 35 million yen)		
Utilizing existing facilities			

## 2. Evaluation Team

### Members of Evaluation Team

Team Leader/General: Yukio NAKAJIMA, Managing Director, First Technical Cooperation Division, Mining and Industrial Development Cooperation Department, JICA  
Mass Standard: Keisaburo UCHIKAWA, Advisor, Japan Quality Assurance Organization  
Testing and Verification: Kazuo NEDA, Head, National Institute of Advanced Industrial Science and Technology  
Evaluation and Monitoring: Natsuko OZAKI, Staff, First Technical Cooperation Division, Mining and Industrial Development Cooperation Department, JICA  
Evaluation Analysis: Shigeyoshi KODA, Unico International Corporation

### Period of Evaluation

8 February 2003 - 28 February 2003

**Type of Evaluation:**  
Terminal Evaluation

## 3. Results of Evaluation

### 3-1 Summary of Evaluation Results

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(1) Relevance: significantly high

Overall Goal corresponded to the Paraguayan development policy.

INTN was a proper receiver of the technical assistance by the Japanese side.

(2) Effectiveness: high

Technical services of INTN in the field of Mass were significantly upgraded as to the level that the service beneficiaries can satisfy with.

Although the career switch of the counterparts delayed the technical transfer from the Japanese side, the delay had been almost overcome.

(3) Efficiency: high

Dispatch of the experts, provision of the machinery and equipment, and training of the counterparts in Japan were appropriate in their contents so that the technical transfer was performed well.

(4) Impact: high / The Overall Goal is going to be achieved in the near future.

Interview data showed the increase of credibility for INTN from target group.

Establishment of the traceability system, in-house calibration of the standard weights, and the publicity activities were factors to achieve the Overall Goal.

(5) Sustainability: high

INTN was in the process of revising the internal regulations to pay a special allowance to the technical counterparts, to cope with the career change of counterparts.

INTN had the self-standing financial resources collected from the testing and verification service fee and made efforts to enlarge the allowable usage of these resources.

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

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(1) Factors Concerning the Planning

Considering the current situation in Paraguay, the project limited the target area to the Mass at the planning stage and clearly and appropriately set the contents of technical transfer.

The project efficiently complemented the delay of procuring the machinery and equipment by conducting lectures. Although job changes of counterparts and damage on the 1t weight adversely affected the technical transfer of the project, the project promptly revised the plan to appropriately cope with the situation.

(2) Factors concerning the Implementation Process

As the project allocated the counterparts of Japanese descent who understood Japanese, the communication between the experts and the counterparts went smoothly.

As the INTN had the self-standing financial resources collected from the service fee, the project transferred techniques mainly by OJT, referring to the increase of services.

As the number of technical counterparts was as small as two in each sector, and the job changes of the counterparts largely affected the technical transfer, the project had to retransfer the techniques to newly assigned counterparts from the beginning.

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

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(1) Factors Concerning the Planning

As the storage was not appropriate to preserve a 1t weight, it was hard to maintain the weight with high accuracy.

Machinery and equipment did not arrive on schedule and were not ready for use at the commencement of the project.

(2) Factors concerning the Implementation Process

As the number of technical counterparts was as small as two in each sector, and the job changes of the counterparts largely affected the technical transfer, the project had to retransfer the techniques to newly assigned counterparts again.

### **3-4 Conclusion**

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The project has been successfully implemented and the objectives are about to be achieved in the near future. The Overall Goal is going to be achieved in the near future.

### **3-5 Recommendations**

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(1) It is recommended that the wage system of INTN is improved, so that the technical counterparts could gain more advantages, such as special allowance and can prevent their turn over.

(2) It is recommended to conduct overseas training as the incentive for the technical staff to stay in INTN.

(3) It is recommended that INTN rearranges its organization in order that the counterparts can work in a team as a countermeasure against their resignation.

(4) It is recommended to secure the budget for the maintenance of the machinery and equipment; for example, in the form of installment saving.

(5) It is recommended to consider quick management and provision of information regarding the technical services in order to improve the services.

(6) It is recommended to continue the publicity activities in consideration of the significance of the project.

(7) It is recommended to establish a system where the technical transfer would be internally performed in view of the sustainability.

### **3-6 Lessons Learned**

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(1) The timing of dispatching long-term experts should be adjusted for smooth technical transfer, considering the delivery schedule of the machinery and equipment.

(2) When machinery and equipment are provided, the condition for installation and maintenance should be considered.

(3) As for dispatch of experts, the order of technical transfer should be considered based on the technical level of counterparts.

(4) The publicity activities to the government authorities other than MIC should involve the head and the person in charge.

(5) The project should investigate the needs of the target groups in detail and quantify the data in order to compare the situations at the start and end of the project.

(6) Prior to the implementation of a short term project, it is necessary to clarify the specifications of the provided equipment and the schedule of delivery..

### **3-7 Follow-up Situation**

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N/A.