

## Summary

### 1. Outline of the Project

Country: The Republic of Ecuador

Project Title: The Project on the Improvement of Vocational Training in Ecuador

Issue/Sector: Vocational training

Cooperation Scheme: Technical Assistance Project

Division in Charge: Technical and Higher Education Team, Group II, Human Development Department, JICA

Total cost (as of the time of evaluation): 812 million Japanese yen

Period of Cooperation:

July 1, 2002 – June 30, 2007

First Stage (July 2002–June 2004)

Second Stage (July 2004–June 2007)

Partner Country's Implementing Organization: Ecuadorian Professional Training Service (SECAP)

Supporting Organization in Japan: Employment and Human Resources Development Organization of Japan

#### 1-1 Background of the Project

The government of Ecuador places priority on the development of human resources in the industrial sector as one of its important issues, with a view to improving the productivity of domestic industries. Vocational training in the industrial sector in Ecuador is implemented only by major training centers, including the Centro de Formación Industrial del Norte (CERFIN) of the Ecuadorian Professional Training Service (SECAP), under the jurisdiction of the Ministry of Labor and Human Resources (now the Ministry of Labor and Employment). Thus, the government has requested technical cooperation from Japan aimed at preparing training materials and equipment, improving the quality of vocational training instructors and revising its curricula.

JICA dispatched its Implementation Study Team in April 2002 and the Record of Discussion (R/D) was signed. The "Project on the Improvement of Vocational Training in Ecuador," a five-year technical assistance project, was inaugurated in July 2002. Specifically, assistants were provided for the courses aimed at upgrading workers' skills in the areas of Metal/mechanics and electricity/electronics, specialized training courses provided to those who have finished secondary education (the Técnico and Tecnólogo courses), and the improvement and implementation of the instructor retraining courses

provided to instructors at major regional training centers (CEFIL, CELFIA and CEFIC). In order to implement these courses, the project is implementing technical transfers for the development of curricula, preparing guidance plans and educational materials and implementing training courses based on the needs of industries, as well as providing the necessary equipment for training. Considering the idea of privatization proposed by the SECAP and the political change that took place prior to the project's implementation, as well as the impact of the presidential change that was scheduled immediately after the start of the project, the project is being implemented in two stages, by dividing the five-year project period into a two-year first half and a three-year second half.

In the Mid-Term Evaluation implemented from January to February 2004, the favorable state of the management and operation of the project was confirmed, and the necessity for continuous technical assistance from the Japanese side was accepted.

This Terminal Evaluation was implemented five months prior to the conclusion of the project, evaluating the accomplishments of the project purpose and the Stage 2 outputs, as well as summarizing the recommendations and lessons learned.

## 1-2 Project Overview

### (1) Overall Goal

To establish a vocational training system that provides skilled workers with the professional abilities required in the industrial sector and to contribute to the improvement of employment opportunity in Ecuador.

### (2) Project Purpose

To improve the operation and administration system of SECAP and its main vocational training centers in order to produce a large number of workers with technical skills (i.e. electricity, electronics, industrial mechanics, metal processing) that meet the needs of the industrial sector, using CERFIN as a base.

### (3) Project Outputs

#### <Stage 1>

1) Needs for training in industries (in major cities) will be assessed by each target field through the reinforcement of the relationship with the industrial sector and the current status of major regional vocational training centers will be examined.

2) Based on the assessment in (1) above, skill-upgrading courses will be modified, developed and implemented empirically.

3) Based on the assessment in (1) above, the implementation plan for the Tecnico and Tecnologo specialized training courses within CEFIRIN will be formulated.

4) Based on the assessment in (1) above, the implementation plan for instructor

retraining courses will be formulated.

<Stage 2>

5) A system aimed at performing regular monitoring of training needs in Stage 1 and reflecting the results thereof in the training program will be established.

6) A training system for employed workers will be established within CEFRRIN, and monitoring of these workers' performance in the industrial sector will be implemented.

7) The Tecnico and Tecnologo specialized training courses will be implemented at CEFRRIN and a job placement support system will be implemented.

8) Retraining of instructors working at the major regional vocational training centers will be implemented at CEFRRIN.

9) Training course curricula and teaching materials developed at CERFIN will be disseminated to other regional vocational training centers.

(4) Project Inputs (from July 2002 to the time of evaluation)

Japanese Side:

Long-term experts	7 persons
Short-term experts	21 persons
Third-country experts	11 persons
Equipment supply	315 million Japanese yen
No. of trainees received in Japan	17 persons

Ecuadorian side:

Assignment of personnel 26 persons (1 Project Director, 1 Project Manager, 12 in Electricity and Electronics and 12 in Metal and Mechanics)

Procurement of equipment and local costs: Net amount inputted into the project is unknown.

## 2. Evaluation Team Overview

Members of the evaluation team

Nobuetsu Enoshita (Team Leader)

Special Technical Advisor, JICA

Toshihiko Yamakawa (Vocational Training)

Vocational Training Specialist in charge of Technical Cooperation, Overseas Cooperation Division, Human Resources Development Bureau, Ministry of Health, Labor and Welfare

Tomoyuki Yamada (Cooperation Planning)

Technical and Higher Education Team, Group II, Human Development Department, JICA

Isao Dojun (Evaluation Analysis)

International Project Department, Chuo Kaihatsu Corporation

Hiromi Higashionna (Interpreter)

Evaluation Period

From January 21, 2007 to February 5, 2007

Evaluation type: e Terminal evaluation

### 3. Overview of Evaluation Results

#### 3-1 State of output achievements

##### (1) Output achievements (for Outputs 5-9 in Stage 2)

###### <Output 5>

“A system to perform regular monitoring of the training needs in Stage 1 and to reflect the results in the training program will be established.”

The survey of training needs introduced by the project has been carried out in 2002, 2003 and 2005 in a generally regular fashion, and it is assessed that a system for regular monitoring of training needs and for reflecting the results thereof into the training plan has been duly established.

###### <Output 6>

“A training system for employed workers will be established within CEFRIN, and monitoring of these workers’ performance in the industrial sector will be implemented.”

The project formulated a system for skill upgrading courses for employed workers, and more than twice the number of courses as originally planned have been implemented. (50 courses were planned and 126 courses were implemented.)

###### <Output 7>

“The Tecnico and Tecnologo specialized training courses will be implemented at CEFRIN and a job placement support system will be introduced.”

In the field of Metal/Mechanics and the field of Electricity/Electronics, 21 and 23 courses were implemented respectively and a total of 353 trainees received training in the former field while a total of 349 trainees received training in the latter. The numbers of courses implemented and trainees accepted both exceed the intended numbers. (The original plan was for 18 courses each for Metal/Mechanics and Electricity/Electronics, with 216 trainees in each.)

One person in charge of job-placement assistance for graduates was assigned at CERFIN and is engaged in information sharing with the Ministry of Labor and Employment and local companies, sharing job information with them and providing

such job information to graduates.

<Output 8>

“Retraining of instructors working at major regional vocational training centers will be implemented at CEFIN.”

While it was originally planned to train six instructors for the respective fields of Metal/Mechanics and Electricity/Electronics on a yearly basis for the three-year period of Stage 2, representing 36 people in total, a total of 17 Electricity/Electronics instructors and 14 Metal/Mechanics instructors had participated in the retraining courses as of this evaluation. Instructor retraining with at least three trainees from each field is scheduled in February 2007, and so it is expected that the targeted figure will be more or less met by the end of the project.

<Output 9>

“Training course curriculums and teaching materials developed at CERFIN will be disseminated to other regional vocational training centers.”

A total of 164 titles of curricula and 131 titles of educational materials for specialized training courses had been developed as of the time of evaluation. The achievement levels of the targeted figures differ by course, ranging from 54% to 100%. As for curricula and educational materials wherein the reviews have yet to be completed, at least one instructor in charge has been assigned to each one, carrying out the reviews. It is expected that the targeted number of curricula and educational materials will be developed by the end of the project.

## (2) Project purpose achievements

<Committees in CERFIN>

Four committees within CERFIN (the Project Implementation Committee, the Academic Committee, the Infrastructure, Safety and Hygiene Committee, and the Marketing Committee) hold meetings periodically. In each of three centers other than CEFIN (CERFIL, CEFIC and CEFIA), four or five committees were established only recently in 2006, and apart from two committees in CERFIL, none have yet to implement regular activities. It is expected that the activities of the committees will be on track during the project period.

<Revised regulations of SECAP regarding the training methods developed through the project>

The revision of technical and pedagogical regulations, which are among the SECAP regulations, was completed in January 2007. With this revision, the development, evaluation and management methods of each training course introduced

within CERFIN by the project became standardized within SECAP, which prepares the grounds for dissemination in its capacity as a model for all centers.

<Number of curricula and educational materials developed or revised by the Working Group>

It is expected that the targeted number of curricula and educational materials will be completed by the end of the duration of the project.

<Number of new and modified courses implemented in four centers>

More than 250 skill-upgrading courses were implemented within CERFIN, which is more than twice the targeted number. As for the specialized training courses, 23 courses in the field of Electricity and Electronics and 21 courses in the field of Metal and Mechanics were implemented, which means that the targeted number has been achieved. In the three centers other than CERFIN (CERFIL, CEFIA and CEFIC), 80 skill upgrading courses and ten specialized training courses using the curricula and educational materials developed in the project were implemented.

## (2) Overall goal achievements

Specialized training courses and skill upgrading courses for both the fields of Metal/Mechanics and Electricity/Electronics have been implemented within each center, contributing to the development and capacity building of more than 5,000 engineers. The job placement rate for those who have completed the specialized training courses is as high as 86.7%, and the satisfaction rate of local companies is also improving.

## 3-2 Summary of Evaluation Results

### (1) Relevance

The relevance of the project is high. As shown in the table below, the manufacturing industry of Ecuador has been growing in proportion to the growth of the national economy, continuously showing itself to be one of the important sectors in Ecuador to achieve steady growth.

Growth Rates of GDP and the Manufacturing Industry in Ecuador

	2001	2002	2003	2001 (*1)	2005 (*2)	Average
GDP Total (%)	5.3	4.3	3.6	7.9	4.7	5.2
Manufacturing Industry (%)	4.9	2.5	4.6	3.2	9.0	4.8

\*1: Nearly final figure; \*2: Provisional figure

Source: Central Bank of Ecuador (Website)

In this context, the government of Ecuador highlights improvements in productivity and vocational skill development as two of the most important issues in its the National Development Plan (2005-2007). In addition, the results of the training needs survey conducted in the project confirmed the presence of a growing demand for the development of human resources with higher level of professional competences.

One of the prioritized issues in the recent Japanese ODA policy concerning Ecuador is poverty reduction measures, and the growth of industry and job creation in Ecuador are being pursued as part of such measures. Therefore, the project purpose is also in conformity with the Japanese policy.

As for the fact that the project was divided into two stages, it made the outputs of the project up to the halfway mark (end of Stage 1) clearer, and also made it possible to make a more realistic plan for Stage 2 based on the achievements of Stage 1. Therefore, it is considered that the relevance of this approach is high.

## (2) Effectiveness

The overall effectiveness of the project is satisfactory and the achievement level of the project purpose is high. The project has succeeded in revising SECAP's technical and pedagogical regulations and diffuses the training courses and management methods introduced in the project as the standards for the training held throughout SECAP. It also established committees in four targeted centers. The Working Groups revised curricula and educational materials of almost the targeted numbers, which are used in the targeted centers.

The remaining concern in relation to the achievement of project purpose is whether the three major regional centers (CERFIL, CEFIC and CEFIA) will henceforth be able to maintain regular and continuous operation of the committee system that has been introduced. These committees were established in 2006 and, apart from two committees, were engaged in continuous activities as of January 2007. Whether these committees become able to implement continuous activities similarly to the committees in CERFIN remains an issue for the future.

## (3) Efficiency

The efficiency of the project is very high. Inputs from Ecuadorian and Japanese sides were appropriate in terms of quantity, quality and timing, such as the dispatch of experts, the appointment of counterpart personnel, the provision of counterpart

trainings held in Japan and the provision of equipment. All outputs were achieved remarkably well. As for Outputs 6, 7 and 8, the project implemented more upgrading courses, specialized training courses and instructors' retraining than were originally planned. The total number of direct and indirect beneficiaries totals 5,768 and the total input from JICA amounts to 812 million Japanese yen (6.8 million USD).

#### Direct and Indirect Beneficiaries of the Project

1) Direct Beneficiaries			34
Counterpart Personnel (Total)			34
2) Indirect Beneficiaries			5,734
Trainees of Upgrading Courses	CERFIN	Metal and Mechanics	1,347
		Electricity and Electronics	2,263
	CERFIL, CEFIC, CEFIA	Metal and Mechanics	688
		Electricity and Electronics	428
Trainees of Specialized Training Courses	CERFIN	Metal and Mechanics	353
		Electricity and Electronics	349
	CEFIL, CEFIC, CEFIA	Metal and Mechanics	91
		Electricity and Electronics	103
Instructors Trained through the Retraining Courses	CERFIN, CERFIL, CEFIC, CEFIA	Metal and Mechanics	14
		Electricity and Electronics	17
		Pedagogy	81

#### (4) Impact

##### <Impact on the overall goal>

It is considered that the overall goal will probably be achieved within five years from now in the fields of Electricity/Electronics and Metal/Mechanics, fields which were directly targeted in the project.

Through this project, SECAP's technical and pedagogical regulations were revised and the training courses introduced by way of the project were standardized within SECAP. It is recommended that the revised regulations be disseminated throughout all centers under the jurisdiction of SECAP, and that the regulations be put into practical use, which will increase the likelihood of overall goal achievement.

##### <Other Impacts>

The project has had a remarkable impact on SECAP's organizational management as well as its public relations, and also in fields other than those directly



covered by the project. SECAP's external reputation increased by the project, and several universities including the Universidad San Francisco de Quito, the Universidad Tecnologica Indoamerica and the Universidad Tecnologica Equinoccial, requested partnership or collaborative programs with SECAP.

The quality of training provided by SECAP is being recognized by the National Council of Higher Education (CONESUP), an organization for the evaluation and authorization of higher education services in Ecuador. The specialized training courses provided at CEFIA were approved as qualified courses by CONESUP. This means that graduates from such specialized courses will be qualified for transfer admission to universities, which results in the significant upgrading of the social value of SECAP's training courses. CERFIN, CERFIL and CEFIC are following suit.

Activities introduced through the project are becoming models for overall training improvement within SECAP. Instructors in other fields, such as automobiles, industrial sewing, construction, carpentry and leatherwork have implemented surveys of training needs similar to this project. Curricula and educational materials revised at CERFIN are being distributed to other centers with the support of the project counterparts. More importantly, retraining courses for instructors in the fields of automobiles and industrial sewing aimed at providing opportunities for instructors to brush up on their knowledge and skills are now being implemented.

Also, with the equipment provided through the Grant Aid Program implemented in parallel with the project, the infrastructure necessary for the provision of training courses similar to those introduced in the project in centers other than CERFIN is being developed, which is contributing in the realization of even greater impacts.

## (5) Sustainability

### 1) Political sustainability

The government of Ecuador is continuously prioritizing industrial development and unemployment reduction through vocational training in its policymaking. The present government is in particular prioritizing the role of SECAP.

### 2) Organizational sustainability

SECAP is a solid organization with a qualified technical and administrative staff, and is able to meet the requirements of the policies of the Ecuadorian government. Therefore, it is important for the government of Ecuador to maintain the present status of SECAP as a public body for the implementation of vocational training in fields that are not easy for the private sector to tackle.

### 3) Financial sustainability

The Ecuadorian side has made the expected budgetary allocations for the project. SECAP has been very enthusiastic in increasing its self-earning income through the additional implementation of training courses, achieving an increase of 50% in its self-earning income over the past four years. SECAP's total budget has been increasing annually. Consequently, it is expected that SECAP will, from a financial standpoint, be able to continue improving its training courses even after the project has been finished.

However, although SECAP collects "training tax" (collecting an amount equivalent to 0.5% of personnel costs) from private companies as a portion of its financial sources, there were times when this training tax was accidentally not allocated to SECAP, and so there is some concern about this system. There is room for improvement in this area in order to ensure the financial stability of SECAP.

### 4) Technical sustainability

Advanced skills and knowledge were successfully transferred to SECAP thanks to the long-term assignment of counterparts. Most of the counterparts have been working with the Japanese experts from the beginning of the project, and all the instructors who received training in Japan are currently working at CERFIN. No sudden replacement of instructors is likely to take place within SECAP. Challenges in terms of technical sustainability include how to successfully expand the skills and knowledge transferred through the project to other instructors. To this end, it is necessary to recruit the necessary instructors as planned, and to continuously implement the retraining of instructors under the project.

The project has succeeded in institutionalizing the training course/training management methods introduced through the project by revising SECAP's technical and pedagogical regulations. Further achievements are to be expected by way of bringing the regulations into practical use.

### 3-3 Factors Contributed in the Production of Effect

- (1) Timely and appropriate inputs from both the Japanese and Ecuadorian sides
- (2) Continuous appointment of counterparts
- (3) Raised awareness in relation to the improvement of the management of counterpart organization headquarters through the success in the targeted centers
- (4) Building of trusting relationship between the Japanese experts and counterparts
- (5) Uniform implementation of activities with the Grant Aid Program
- (6) Stable operation of the counterpart institute (operation by the official staff of SECAP and stable operation by the administrative board)

## (7) Active utilization of third-party experts

### 3-4 Problems and Factors that Raised Problems

As a result of the fact that some of the “training tax” from Ecuadorian companies were not been allocated to SECAP in 2006, there was a delay in the increase of staffing at three regional centers (CERFIL, CEFIA and CEFIC).

### 3-5 Conclusion

(1) The project’s original goal and outputs are being achieved. Therefore, the team hereby concludes that the project should be terminated on June 30, 2007 as originally scheduled. The most outstanding output of the project has been the large number of training courses implemented and the high quality of these courses. Inputs were implemented in a timely manner for the launch of the multiple training courses.

(2) It is most important result in terms of project sustainability is that the new Ecuadorian administration, which was inaugurated in January 2007, is identifying the enhancement of vocational training programs under SECAP as among the highlights of its policy measures. SECAP is not only increasing its self-earning income through the improvement of management through the project, but is also applying for additional funding, and as such the project is expected to be highly sustainable in both financial and organizational terms.

(3) Through the success at CERFIN, SECAP’s managerial staff has become more positive towards managerial improvement, which means that they have gained ownership of the project. As a result, SECAP succeeded in improving its external image and obtaining accreditation approval from CONESUP. Also, the revision of SECAP’s regulations through the project’s activities hints at a significant contribution to changing in the level of awareness on the part of SECAP’s managerial staff.

(4) The synergy effect with the Grant Aid Program, implemented in parallel with the project, under which training equipment was supplied to the six SECAP centers, is also noteworthy. In the process of selecting the equipment to be supplied through the Grant Aid, due consideration was given to the level of technical skills and knowledge to be transferred through the project. As a result, a foundation was established for the nationwide extension and implementation of such technical skills and knowledge.

(5) Among the challenges that remain to be faced by SECAP, one of the most important issues is the weak management capacity in certain centers. It will take some time for these centers can overcome this challenge under the supervision of SECAP Headquarters. For the time being, it has been suggested that advice and support from

the Japanese side will be necessary.

### 3-6 Recommendations (Specific Measures, Recommendations and Advices on this Project)

<Recommendations for activities during the remainder of the project period>

Activities specified in the PDM should be continuously implemented. It is particularly important to monitor and promote the expansion and consolidation of outputs generated through the project thus far. The following activities are recommended:

- 1) Making practical plans for the retraining of instructors to be implemented after the conclusion of the project
- 2) Promoting regular activities for committees established within CERFIL, CEFIC and CEFIA.

<Recommendations for the activities following the conclusion of the project>

- (1) Continuous and expansive implementation of the retraining of instructors

In order to make full use of the achievements of the project, it is necessary to continuously implement the retraining of instructors in a widespread manner based on the plan suggested above.

- (2) Recruitment of instructors

Additional instructors should be recruited in order to implement the Tecnico and Tecnologo courses at centers other than CERFIN. The recruitment of instructors is necessary not only for the succession of project outputs but also for the replacement of instructors due to age. For instance, the current average age of instructors in the field of Metal and Mechanics at CERFIN is 48.6, while there are no instructors below the age of 30, and there are seven instructors above 50. It is important to actively recruit younger instructors also from the perspective of the continuous implementation of the program.

- (3) Strategic partnership with the industrial sector

It is necessary to further strengthen collaboration with the industrial sector in order to grasp training needs and trends as well as to provide training courses that correspond with demand. This should also lead to an increase in the self-earning income of SECAP.

- (4) Enhancement of public relations

As was experienced in the project, the enhancement of public relations of SECAP contributes in the improvement of its organizational management. Therefore, measures such as the strategic enhancement of public relations and the utilization of ICT are recommended.

(5) Maintenance and replacement of training equipment and machinery

SECAP should recognize that all training equipment, including that introduced through the project, will be outdated in 10 or 15 years. It is necessary to foresee the necessity of the renewal of training equipment and to take practical measures such as increasing the annual budget for replacement.

3-7 Lessons Learned (Matters Helpful for Discovering/Forming Similar Projects Derived from this Project and Implementation, Operation and Administration Thereof)

(1) Importance of understanding the needs of beneficiaries at preparation and implementation stages

Basic investigation, implementation research and other short-term studies were implemented prior to the commencement of the project in order to assess the relevance of the fields in question closely. Upon establishing the training courses, the training needs of local companies had been sufficiently surveyed and incorporated in the actual training courses. This led to the implementation of training that matched the needs of the trainees. In the latter half of the project period, SECAP operations were overseen by SECAP administrative staff who thoroughly understood the actual state of training course beneficiaries, which made it possible to implement training courses that met the trainees' needs in a consistent manner.

(2) Dissemination and consolidation of the project outputs through institutionalization

With various approaches introduced through the project (surveys of needs, Committees, Working Group, retraining of instructors, etc.) becoming institutionalized in the form of SECAP regulations, the grounds for the dissemination and consolidation of project outputs were provided.

(3) Importance of the improvement of counterpart institution management

The fact that the project activities cover not only the improvement and implementation of training courses in the targeted centers but also the improvement of management in the entire organization of SECAP contributed in the achievement of the project purpose. Uniform implementation in conjunction with the Grant Aid Program and instructions from experts raised expectations for Japanese assistance within and outside SECAP, which contributed to the development of awareness in regards to the improvement of management among the SECAP staff.