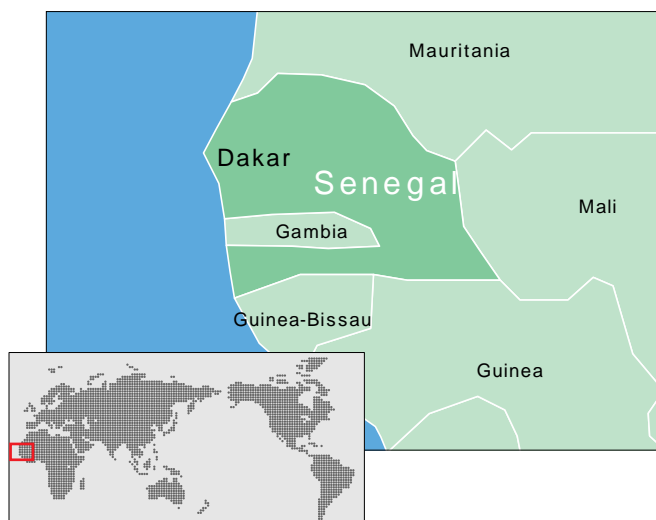


## Senegal

## Vocational Training

## Project Sites

Dakar



### 1. Background and Objectives of Evaluation Survey

Japan, which believes that contributing to the resolution of problems in African countries is instrumental to world peace and stability, had been working to increase economic cooperation and promote personal exchange and mutual understanding. During the Second Tokyo International Conference on African Development which was held in Tokyo in October 1998, both donor countries and African countries further reaffirmed their commitment to African development.

Senegal is an important country for Japanese cooperation in Africa, and has become a key country of the Development Assistance Committee's new development strategies. With the goal of drawing lessons and recommendations in order to plan and implement sustainable human resources cooperation in Africa, this evaluation looks at the Senegal-Japan Technical and Vocational Training Center (Centre de Formation Professionnelle et Technique Senegal-Japan: CFPT), a typical human resources cooperative effort in the area. This evaluation was performed by Mr. Takuo KAWADE of the Mainichi Shimbun, who, as a journalist, has investigated the effectiveness of public enterprises in Japan.

### 2. Evaluated Projects

Project for Construction of the Technical and Vocational Training Center (FY1982, FY1983, Grant aid)

Senegal-Japan Technical Vocational Training Center (February 1984-March 1991, Project-type technical cooperation, April 1991-March 1993, Follow-up cooperation, April 1995-December 1995, After-care cooperation)

### 3. Members of Evaluation Team

#### Team Leader:

Mr. Takuo KAWADE, Vice-Chief, Chiba Bureau, Mainichi Shimbun

#### Evaluation Planning:

Mr. Toru TOGAWA, Deputy Director, Office of Evaluation and Post-Project Monitoring, JICA

#### Vocational Training:

Mr. Kiyoshi UMEMOTO, General Manager, International Cooperation Department, Overseas Vocational Job Training Association

### 4. Period of Evaluation

17 November 1998-28 November 1998

### 5. Status of Vocational Training in Senegal

#### (1) Senegal's Public Education System

As a former French colony, Senegal's educational system was strongly influenced by that of France, and thus is very similar to the French system. The basic format is six years of primary school, four years of junior high school, and three years of high school. The academic year, which differs from Japan's, begins in October and ends the following July.

Education in Senegal is divided into the following stages: preschool education, elementary education, secondary education (phase one), secondary education (phase two), and higher education.

#### 1) Preschool Education

Preschool education is equivalent to Japanese kindergarten education, and accepts children under the age of seven. No particular qualifications are granted during education at this level.

#### 2) Elementary Education

Elementary education is equivalent to Japanese primary school, and the age of school entrance is seven. However, in certain cases, children from ages six through eight are permitted to enter school. There are six years of elementary education, the first four of which are compulsory. Children automatically progress through the four years of compulsory education, but after that, failing grades are possible and they are allowed to fail up to twice. At the end of elementary education, there is a certification examination, (Certificate of Elementary Education: CEPE).

#### 3) Secondary Education (phase one)

Secondary education is equivalent to Japanese junior

high school, but is one year longer, at four years. The age of school entrance is 13, but in certain cases, students from ages 12 to 14 are permitted to enter school. In order to enter school, students must hold a CEPE certificate and take an entrance examination. Students are permitted to fail only one grade out of the four.

At this stage, there are general courses and technical courses. Upon graduation, students are granted the Patent of Completion of lower Secondary Education (Brevet de Fin d'Etude Moyenne: BFEM), certification that they have completed the first phase of secondary education.

#### 4) Secondary Education (phase two)

Phase two of secondary education is three years and is equivalent to Japanese high school. Students must hold a BFEM certificate as a prerequisite for entrance. Normally, students who are continuing on to phase two at the same school where they completed phase one are permitted to enter with only a school assessment. The age of school entrance is normally 17, but in certain cases, students from ages 16 to 20 are permitted to enter. Only one failure is allowed.

At this stage of education, as in the previous stage, there are general courses and technical courses. Upon graduation, students may receive a Baccalaureat (BAC), which qualifies them to enter university.

#### 5) Higher Education

Higher education in Senegal is equivalent to Japanese university and graduate school education. To enter university, students must hold a BAC and take an entrance examination. The age of school entrance is normally 20, but in certain cases, students under the age of 19 with a BAC who pass the entrance examination are permitted to enter.

The period of study is three years, at the end of which students receive a bachelor's degree (License). One further year earns a master's degree (Maitrise) and one year after the Maitrise earns a Doctoral Qualifying Degree (Diplôme d'Etudes Approfondies: DEA). After three years of study following the DEA, or, in other words, after a total of eight years of study, a student is awarded a doctoral degree (3<sup>e</sup> cycle). For medical and pharmacy courses, the period of study is six years, after which the student receives a doctoral degree (Doctorat). Those in engineering and other technical fields receive separate qualifications. For example, graduates of the two-year course at Higher National School of Technology receive University Degree in Technology (Diplôme d'Universitaire de Technologie: DUT) and graduates of the four-year course receive a Diploma of Engineer in Technology (Diplôme d'Ingénieur de Technologie: DIT).

As shown, Senegal has certification examinations upon graduation in every stage of the education system, and students who pass the examinations are able to advance to the next stage. Also, in terms of finding employment, if a student does not possess a particular qualification certificate it is assumed he or she has not completed that level of education. The certificate is, therefore, an important element in the determination of selection and working conditions



Interviewing graduates of the Senegal-Japan Technical and Vocational Training Center

(particularly those related to salary).

The various qualifications acquired through Senegal's education system are treated the same as the corresponding qualifications acquired not only in neighboring former French colonies, but also in France. As a result, qualifications earned in the Senegal education system are applicable if a student has been accepted into an educational program of the next stage in France.

#### (2) Overview of Vocational Training in Senegal

Vocational training in Senegal, with the exception of specialized fields, is administered by the Ministry of National Education. Vocational training is received either after one has completed general education or when one switches vocational training fields midstream.

The main vocational training facilities in Senegal, other than CFPT which is the subject of this evaluation, are the Polytechnic College (Ecole Supérieure Polytechnique: ESP), the National School of Secretariat (Ecole Nationale de Secrétariat: ENS), the Professional Teaching Center (Centre d'Enseignement Professionnel: CEP), the Institute of Cut Sewing and Fashion (Institut de Coupe Couture et Mode: ICCM), the Delafosse National Center of Industrial and Commercial Professional Courses (Centre National des Cours Professionnels Industriels et Commerciaux Delafosse: CNCPICD), the Center of Artisanal Formation (Centre de Formation Artisanale: CFA), and the National Center of Professional Qualification (Centre National de Qualification Professionnelle: CNQP).

The main qualifications received upon passing the examination at the end of vocational training are the Certificate of Aptitude for Secondary Technical Training and Professional (Certificat d'Aptitude à l'Enseignement Secondaire Technique et Professionnel: CAESTP), the Certificate of Aptitude for Middle Technical Training and Professional (Certificat d'Aptitude à l'Enseignement Moyen Technique et Professionnel: CAEMTP), the Higher Technician Certificate (Brevet de Technicien Supérieur: BTS), the Technician Certificate (Brevet du Technicien: BT), the Patent of Professional Teaching (Brevet d'Enseignement Professionnel: BEP), the Certificate of Professional Aptitude (Certificat d'Aptitude Professionnelle: CAP), and the Diploma of Technician of Rural Development

(Diplôme d'Agent Technique de Développement Rural: DATDR). Graduates of the CFPT may qualify to take the BT examination.

## 6. Results of Evaluation

### (1) Background and Outline of Cooperation

In August 1979, the Government of Senegal requested cooperation from Japan for the establishment of the Electrical Engineering Vocational Training Center, in order to cultivate mid-level engineers necessary in promoting electrical engineering. Based on this request, Japan dispatched a survey team, added the fields of electronics and mechanics, and implemented a combination of grant aid and project-type technical cooperation.

The activities of this project began in February 1984 with the start of project-type technical cooperation. Afterwards, Japan extended the cooperation period until 31 March 1991, and implemented two further years of follow-up cooperation focusing on some training courses in which technology transfer had not been fully completed. Additionally, in November 1994, Japan dispatched an after-care study team, and based on their report, implemented after-care cooperation from April to December 1995.

### (2) Effectiveness

The purpose of this project was to perform vocational training in order to impart basic knowledge and technical skills concerning industrial facilities (electronics, electric, and mechanics), and to create a mainstay of skilled workers in Senegal by establishing the CFPT and conducting technology transfer to CFPT's counterparts. This objective has been accomplished through ten years of Japanese cooperation, as shown below.

#### 1) Enhancement of the Training Course

At the start of project-type technical cooperation in 1984, there were 150 trainees in five courses in three subjects (10 trainees x 5 courses x 3 years). At the time of this evaluation, there were 58 trainees in the first year of the courses, 55 in the second, and 43 in the third for a total of 156 trainees. In the past five years, the number of enrolled trainees has hovered around 160.

These numbers pertain to the daytime training courses. In 1993 the CFPT independently established night courses and, at present, the number of trainees enrolled in the night courses reaches 272. The dispatch period of the Japanese experts for project-type technical cooperation ended in March 1991. Instructors at the CFPT were handling double the amount of work while waiting to resolve problems concerning their tenure and compensation.

Additionally, the CFPT began training for company employees in 1989 as a response to requests from private companies. According to materials obtained, this year's results are 121 employees in 16 courses, for a total of 1,257 hours of training.

### 2) Trends of CPFT Graduates

A total of 542 trainees have graduated from the CPFT between 1987, when the first 29 trainees completed the three-year course, and 1998. Of these graduates, 482 have taken the BT qualification exam and 348 have passed: a success rate of 71%. In that same period, 257 of the 299 people seeking jobs have been successful, or 86%. By one year after graduation, nearly all were employed. Both the BT achievement rate and the employment rate indicate the incredibly high success of the CPFT as compared to other institutions.

### 3) Activity of Graduates and Social Evaluation of the CFPT

Employed graduates are active as engineers and technicians supporting the core of Senegalese industry, and are evaluated very highly by their employers. Also, the graduates themselves are very satisfied with the content of the training received at the CPFT.

As a result, it would not be an exaggeration to say that the CFPT is the first choice of engineering students. In particular, the CFPT is unrivalled by other industrial high schools and vocational training institutes in terms of offering BT qualifications, and is consequently seen by them as a model in all subjects. It is thought that this is due to the technology transfer of management techniques, as well as in each training field, and the superiority of the Japanese equipment supplied.

### 4) Technology Transfer to Training Instructors

Placement conditions of CFPT instructors have improved from 20 instructors in the original plan to 30 instructors at present. Of these, 16 were counterparts of the Japanese experts. In the seven years of technical cooperation between 1984 and 1991, a combined total of 43 short-term and long-term experts were dispatched in three phases. The good results being enjoyed by the CFPT today clearly suggest that the technology transfer from the experts to the counterparts and the secondary transfer of technology from the counterparts to other instructors have been implemented successfully. Although 11 CFPT instructors have been unable to achieve the necessary qualifications to acquire national civil servant status, it is hoped that the attainment of the qualifications will be promoted for the sake of stability of their status.

### 5) Maintenance of Equipment and Facilities

Although maintenance of equipment and facilities is generally satisfactory, some electric and electronic parts have become unusable after 13 years. Assistance from the Japanese side in procuring specialized parts that are unobtainable in Senegal is called upon.

## (3) Impact

This project has had a social and economic impact not only in Senegal but also in neighboring countries.

### 1) Socioeconomic Impact on Senegal

Senegal has had difficulty coping with the great changes in industrial structures throughout the 1980s and 1990s. The

prolonged downturn in primary products, the imbalance of international balance of payment, and the existence of expanding informal sectors have become even more complicated. In labor markets, out of a total population of 9.4 million people (1997 estimates, CIA report, same as below), 4.6 million of which are working-age, 175,000 are employed, 60% in the public sector and 40% in the private sector. Employment figures have been decreasing since the peak of 230,000 in the middle of the 1980s.

In this extremely limited labor market, the supply of high-quality personnel made possible by the CFPT has been judged to have a positive impact, both qualitatively and quantitatively, on Senegal's domestic society and economy.

Graduates of the CFPT have gone on to hold important jobs mainly in the maintenance sections of various companies, and are assigned such roles as monitoring the latest machines. Some are holding management positions at small-and medium-sized companies. It has become clear that, because of their attitude, basic knowledge, and technical skills, the graduates are justly appreciated and properly compensated by their employers. As the training for active employees meets local needs by responding to the demands of private companies, the activities of the CFPT are evaluated very highly by the industrial sector.

Also, with the success of the CFPT, the Government of Senegal is making preparations to establish a department (information technology and automated systems technology) to train advanced engineers and technicians at the junior college level.

## 2) Impact on Neighboring Countries

What also deserves special mention in this evaluation is the high reputation this project enjoys not only among people within Senegal but also in French-speaking African countries (comprising 21 nations). According to the Director General of the Direction of Vocational Training at the Ministry of National Education, the CPFT is now considered one of the three best training centers in this vast region. The other two centers are Morocco's Rabat Center (printing training) and Gabon's Libreville Center (computer training). This statement is corroborated by the fact that a total of 138 trainees from 17 countries have been accepted in the CFPT since the program for trainees from neighboring countries was established in 1990. However, the number of trainees from foreign countries is limited to 15% of the total (20 to 22 people) in order to give priority to Senegalese citizens.

## (4) Relevance

The overall goal of this project at the time it was formulated in 1984 was to work to shift from a monoculture economy centering on agriculture to the promotion of secondary industry centering on light industry through the cultivation of mid-level engineers. As the basic policy goals in Senegal have remained unchanged in the past 14 years, this project has been evaluated as being highly relevant.

### 1) Policy Priority

Senegal has a large informal sector. One theory holds



Interviewing the director, educational affairs director, and section chiefs of the Senegal-Japan Technical and Vocational Training Center

that 60% of the GNP and almost all of the employment is wrapped up in the informal sector. The existence of such a sector places a large restriction on the government's administration capabilities and the mobilization of resources. Under these conditions, Senegal's national budget grants priority allocation (20 to 30%) to the Ministry of National Education, 10% of which is appropriated for vocational training. The development of human resources is Senegal's national strategy, which appears in the current ninth Economic and Social Development Plan (1996-2001) and the National Public Investment Plan (1997-1999).

Through administrative reforms in 1995, the Direction of Vocational Training was transferred from the Ministry of Technical and Vocational Training to the Ministry of National Education. The Direction is making steady progress in the establishment of government ordinances (concerning an accreditation system) and organizational reform (the establishment of the National Cooperation Committee) with the aim of developing practical human resources that can benefit socioeconomic development by consolidating general and technical education.

## 2) Course Organization

The goal of this project has been to train mid-level engineers in the three fields of electrics, electronics, and mechanics. In Senegal during the 1990s, entrepreneurship in the electronics and information industries was remarkable; the number of companies in these industries increased from 10 in the early 1990s to 80 at present. Applications to the CFPT reflect this trend, particularly in the desire to enter the electrics and electronics courses. It has been pointed out that development of the electronics and information industries, instead of conventional light industry, could prime the pump for industrialization in Senegal. In other words, in the case of Senegal, the specialization in more cutting-edge fields, which the informal sector cannot follow, is extremely advantageous. From this viewpoint, it is obvious why this project focused on training courses in electrics and electronics rather than traditional occupational fields.

There are a few problems in the automobile mechanics course. The job-finding rate for this course is the lowest of

the five courses offered at the CFPT, and is decreasing even further. The reason for this is that, because the automotive repair industry in Senegal is largely at the village-factory level, it is not a good match for CFPT graduates with BT certification. Senegal's transition to motorization may create the necessity for modifications to this course. The general mechanics course, through the judgment of CFPT itself, is being revised to focus more on electronic systems technologies.

## (5) Sustainability

After the period of Japanese cooperation ended, the Senegalese staff has been enthusiastically continuing and developing the CFPT's activities by themselves, while overcoming financial difficulties.

### 1) Operation and Management

Since training courses began at the CFPT in 1984, its activities have been expanded at a relatively rapid rate with the commencement of employee training in 1989, the acceptance of foreign trainees beginning in 1990, and the night training course in 1993. The primary transfer of technology from the Japanese experts to the Senegalese counterparts and the secondary transfer of technology from the counterparts to their colleagues were conducted efficiently, and was successful in generating a group of highly-skilled instructors. At the same time, the human resource development strategies of the Senegalese government have been clear and firm over the long term, which has been reflected in the unsurpassed leadership and administrative capabilities of the CFPT management. Organizationally, according to the Center director, with the establishment of the educational affairs director position and the increase in instructors and staff in the general affairs department, all of the staff at the CFPT are working very ambitiously to make the most of the teamwork and challenging spirit that they learned from the Japanese management style.

The instructors are constantly working to understand training needs by, for example, visiting private companies, and are improving the training curricula.

### 2) Financial Base

The greatest challenge to CFPT's operation is its financial problems. Because the Government of Senegal is constantly in financial straits, the CFPT, although it supposedly receives priority funding, is only directed with 20% of its management budget. Therefore, the CFPT decided to charge fees for employee training, the night courses, and the foreign trainee course, and has used this income to pay the personnel costs of instructors and make improvements to facilities such as the cafeteria and the basketball court.

Also, as the Ministry of National Education has determined that, in the fields of information engineering and automated systems, the industrial world's demands cannot be responded to at the level of BT certification, it has requested technical cooperation from the Japanese Government for the planning of the foundation of a two-year Brevet de Technicien Supérieur (BTS) course. This year, it has commenced construction of a building (approximately 320m<sup>2</sup>) for this

course, with its own funding, on the CFPT grounds.

## (6) Conclusion

### 1) Achievements

The primarily overall goal of the CFPT, which is the subject of this evaluation, is "to shift from a economy centering on agriculture to the promotion of secondary industry centering on light industry through the cultivation of mid-level engineers." Assuming that, in order for this evaluation to determine whether or not this objective has been met, it has to be conducted by considering what effects the CFPT has had on the Senegalese economy and to what extent industrialization has progressed. However, as the CFPT itself does not actually conduct direct production activities, this sort of macro-evaluation is not easy to conduct. If figures such as the rate of contribution to the GNP could be calculated, an objective evaluation could be made to a certain extent, but this is not possible for practical considerations.

Instead of these figures, this evaluation requested data on the job-finding rate of graduates and the BT success rate. It also referred to the evaluation of the graduates by the employers and the evaluation of the content of CFPT instruction by graduates and current trainees.

Should a judgment be made using these evaluation results and data as an index, the Center can be judged as achieving its original objective.

### 2) Reasons for Success

Why was the CFPT able to achieve its objective? The reasons can be divided into three main categories.

#### a) Timely Project

The first is that, the CFPT accords with the demands of the Senegalese society. It is considered a timely project. This can also be seen from the job-finding rate of graduates and the BT success rate, mentioned previously. This is not surprising considering the CFPT was a project started at the behest of the Senegalese side, but also hints at the appropriateness of the feasibility study conducted by the Japanese side.

#### b) Response to Results of Various Studies

Another reason is that the CFPT has been conducting improvements as a response to the results of this project's evaluation study and after-care study. For example, the recommendations of the evaluation study conducted in 1990 (the appropriate implementation of employee training, the expansion of test-taking facilities for the entrance examination, etc.) have been largely translated into reality. It is desirable that the results of the evaluation survey be made use of. It has been said that there have been cases of "after construction, nothing else" in previous Japanese assistance, but in the case of the CFPT, after-care was thoroughly conducted after the end of cooperation.

#### c) Superior Staff

Finally, the enthusiastic efforts of the parties on the Senegalese side must be mentioned. As seen from the reorganization of the courses, the current staff members are

overcoming difficulties with superior creative ideas. The establishment of the night courses and the acceptance of trainees from companies and foreign countries contribute not only financially but also to the revitalization of the CFPT. In addition, the fact that training equipment is being managed nearly perfectly is worthy of special mention. Having possessed such superior staff is an important factor you never overlook regarding the CFPT's success. It is thought that the possession of such superior staff is largely due to the fact that staff education, such as study abroad in Japan and the acquisition of skills after learning the Japanese language, was appropriate.

### 3) Future Issues

Although this project was successful, there remain a few problem areas to be improved. Rather, it is because the project was successful that its problems were brought into clear view.

#### a) The Necessity for After-Care

One issue is the fact that some of the machinery is not being operated due to lack of parts and other factors. No matter how it is explained, it is very difficult to understand that expensive machinery will not operate due to lack of only one component. This is an issue of after-care. As the fact that "the results of the after-care study were reflected" at first appeared to be a reason for success, this would seem absurd, but it is not. The fact that some of the machinery did not function was because the after-care studies tended to be from a broad perspective and detailed could therefore not be performed. It was reasoned that because in many cases breakdowns of machinery and damage to machine components occur suddenly, they cannot be responded to with only one after-care over many years. In order to respond to this issue, it would be good if there were a permanent information-sharing system between the CFPT and the Japanese side concerning the maintenance of key equipment. Regarding items that can be maintained at the site, self-help efforts from the CFPT are obviously in order, but regarding items that they cannot maintain (such as the numerically controlled lathes which were proved to be impossible to repair in this evaluation), it would surely be possible to respond through a quick communication with the Japanese side. Additionally, if there are parts that can actually not be obtained at all and as a result, the machines cannot be repaired, the CFPT should be quickly notified and investigate the disposal of the machinery. Should this happen, these "useless objects" will cease to waste space. This thoroughness is surely what is most required of after-care.

#### b) Training of Staff

Another issue is that of staff. Almost all of the current staff members of the CFPT have training and study experience from Japan, and have as a result learnt a positive mind which Japanese has to work hard. As mentioned before, the CFPT has been operating due to the staff's efforts and creative ideas. However, they will not be the staff forever. The next generation of staff must be systematically trained. Otherwise, it is thought that activities will cease to go smoothly as soon as staff members are changed. Although, how to find and train good staff is a matter for the partner



Interviewing trainees of the Senegal-Japan Technical and Vocational Training Center

country, it is not a simple matter so it will be necessary to consider measures to do so. In particular, it will be desirable to establish a system for the training of experts to manage this type of vacation training facility.

#### c) Reorganization of Courses

The course structure must also be improved. Considering Africa's regional characteristics and stage of development, shouldn't the establishment of information-related courses (such as computers) and environment-related courses be called for? In terms of lesson content, higher-level courses like the separately investigated BTS (Brevet de Technicien Supérieur) course are demanded<sup>1)</sup>.

As clearly indicated by the fact that many graduates have asked "Will graduates be able to enter the BTS course?" the desire to acquire even higher-level technology is strong. It is thought that this desire is related to the progress of industrialization in Senegal. The present CFPT must not become rigid but constantly adjust to Senegal's stage of development.

#### 4) The Expansion of Aid Effects

The CFPT has been so successful that it has become one of the top three facilities of its kind in all French-speaking African countries. Currently, the CFPT is being called on to take measures to further increase these achievements. This would certainly establish it as a key training center in the western African region.

At present, the CFPT receives trainees from neighboring countries. This activity started in part to secure financial resources. It is extremely advantageous for the CFPT. According to people involved with the CFPT, the problem with the acceptance of foreign trainees is the difficulty in securing lodging for them. If that is the case, perhaps Japan could construct residential facilities so that the Senegalese side can establish a permanent system for inviting foreign

trainees. Building facilities similar to the CFPT in neighboring countries and ensuring that they also enjoy good results as the CFPT would require a great deal of funding and time. Perhaps such a system could be quickly studied at the same time as the establishment of a BTS course.

The approach of providing many individual cooperation projects is no longer usable. In order to expand assistance effects from small points to larger areas, upgraded future assistance programs using successful cooperation projects like the CFPT as a base must be seriously investigated<sup>2)</sup>.

## 7. Lessons Learned and Recommendations

### (1) Meticulous After-Care

To projects like the CFPT that are making continuous efforts towards sustainability and spreading various positive impacts, Japan should give priority to implementing supplementary assistance after the original cooperation period is over. By doing so, the cooperation effects will be expected to further spread and the impact of the investment will be heightened as well.

### (2) Strengthening Relations with Japanese Aid Organizations

Close cooperative relationships (graduation qualifications through a credit recognition system) are formed with the organizations with which project-type technical cooperation experts are affiliated (vocational training schools, vocational training college). The goal is to construct even wider partnerships, through not only the implementation of technical supplements through training in Japan but also through a credit-exchange system to obtain qualifications.

### (3) Efforts Towards Organizational Sustainability

The CFPT, which was forced to seek other means to secure financial resources by itself due to the severe financial situation of the central government, has planned and begun to offer fee-based training such as employee training and the night courses. Not only were these successful in gaining important financial resources for management purposes, but relations with the companies involved have become stronger. As a result, the CFPT's accurate understanding of the companies' demands, and employment of its graduates were promoted.

If the facilities and technical capabilities of the partner country's implementing organization have an element that can bring added value, it is necessary to work towards activities (such as employee seminars and night courses) to secure independent financial resources. In order to implement these activities, it is essential to conduct adequate market researches through constant contact with involved companies, and to actively promote efforts towards technological innovations and training programs. In order for this, it will be necessary to assign a public relations specialist. It will also be important to include not only technical, but also management training, in the training curriculum provided by Japan for the core instructors at the partner country's implementing organization.

### (4) Developments in Regional Cooperation

Implementing many Japanese technical cooperation projects

in the western African region is not easy due to issues with funding, human resources, and language. However, if the CFPT, which is already becoming a base for regional cooperation in French-speaking Africa, were to receive accreditation like the JICA Regional Training Center, for example, it would likely be able to expand cooperation effects to a wide range of the region.

In projects that have the possibility for developments in regional cooperation, it is beneficial to work towards aiding sustainable development with the perspective of expanding effects into neighboring countries starting from the project formation stage, by conducting investigations of the needs of surrounding countries until the end of the cooperation period, and implementing after-care.

### (5) Combination of Cooperation Schemes

JICA cooperation projects (other than the CFPT) visited during this evaluation study in Senegal, realized results in aid schemes, such as grant aid and the dispatch of JOCV members. In the future, further devices to create organic relationships between these aid schemes would be beneficial. For example, the construction of cooperative relationships between the activities of JOCV members (e.g. public health nurses and sanitation workers) and a rural water supply project through grant aid should be promoted actively.

In order to foster alignment of related co-operations, which are often implemented separately for each target area and local units, it is desirable to form the entire project after first understanding the development issues of each area and the assumed aid schemes at a micro-level. In such projects, when multiple ministries and agencies are involved, it is important for JICA to proactively coordinate between them.

<sup>1)</sup> In April 1999, a five-year project-type technical cooperation entitled "High-Level Technician (BTS) Training Project at the Senegal-Japan Vocational Training Center" was begun in order to establish and implement a BTS course at the CFPT.

<sup>2)</sup> In FY1999, a five-year third country training program entitled "Vocational and Technical Training for African Countries" was begun at the CFPT, targeting 11 French-speaking African countries (Senegal, Mali, Mauritania, Togo, Cote d'Ivoire, Niger, Burkina Faso, Guinea, Gabon, Benin and the Central African Republic).