

Djibouti

The Project to Supply Potable Water in Rural Areas

Project Sites

Yoboki, As-Eyla, Ali-Adde, Doureh

1. Background of Project

Djibouti is located in the Horn of Africa, northeast end of the continent, and is comprised primarily of deserts and mountainous regions. Because salt water mixes into underground water at the coastline and the salt content in soil dissolves into underground water in the inland areas, usable water sources are extremely limited. Therefore, water sources are often five to 20 kilometers away from villages, so the water supply to local community is in extremely poor condition and the Djibouti government has placed the development of water resources and the provision of water for everyday use in rural villages as a priority issue.

Under these conditions, the Djibouti government, with the objective of improving water supply conditions in rural areas, requested grant aid from Japan in order to establish and improve water facilities in rural villages.

2. Project Overview

(1) Period of Cooperation

FY1995 and FY1996

(2) Type of Cooperation

Grant aid

(3) Partner Country's Implementing Organization

Ministry of Agriculture and Hydraulics

(4) Narrative Summary

1) Overall Goal

To improve the standard of living of people in rural villages.

2) Project Purpose

To improve the condition of water supply to rural villages.

3) Outputs

- Water supply improvement equipment (pumps, generators) at 16 locations are established.
- Equipment to survey underground water is established.
- Water supply facilities in four villages are built.
- A system for the maintenance of water supply facilities is established.



4) Inputs

Japanese Side

Grant 972 million yen
(E/N amount)

Djibouti Side

Land
Staff to maintain and manage facilities
Local cost

3. Members of Evaluation Team

JICA France Office
(Commissioned to Earth and Human Corporation)

4. Period of Evaluation

5 September 1998-13 September 1998

5. Results of Evaluation

(1) Efficiency

The construction of water supply facilities was completed and delivered to the Djibouti side according to plan in the expected time period.

(2) Effectiveness

As for water supply improvement equipment, generators have been placed in all villages and underwater pumps are being successively replaced. The majority of them are in use.

However, the situation of the use of the water supply facilities differs from village to village, and some facilities are not being sufficiently utilized due to a lack of fuel and other reasons.

(3) Impact

The gathering of local women at water supply facilities to collect water has enabled greater communication among the residents. In some villages, the improvement in water supply conditions prompted resettlement after the civil war, increasing their population.

On the other hand, with a communal tap system, much

labor is wasted by villagers having to travel a long way to the water supply. Also, there has been some hassle over limited water resources.

(4) Relevance

Although the villagers need door-to-door water supply rather than the communal faucet system established by this project, the relevance of this project is high because it could help Djibouti's rural villages that always suffer from an extreme shortage of water and also help them recover from the recently ended civil war. It is thought that the water supply facilities established by this project will be put to good use.

(5) Sustainability

A water utilities fee is not being collected in each individual village, but rather, the cost of water supply is, in principle, borne by the republic. There are villages in which a water management committee has been organized, but they have no function. Djibouti is currently implementing structural adjustment; therefore, because of financial restrictions, the supply of fuel for the pumps and the salaries of the facilities' managers are being delayed.

In order to improve the current situation, it is necessary to maintain dialogue with the villagers, to organize water management committees that involve the villagers, and to introduce a scheme in which the beneficiaries share the costs.

6. Lessons Learned and Recommendations

(1) Lessons Learned

Through the holding of town meetings, the opinions and needs of local community should be understood beforehand, and those needs reflected in the plans. The promotion of dialogue with local community is extremely important to ensure good use of and sustainability of established facilities.

In arid regions like Djibouti, it is desirable to implement pumping tests not only during the rainy season but also during the dry season.

(2) Recommendations

It is indispensable to collect a water utilities charge from the beneficiaries of the water supply for the maintenance of the facilities, but since water has heretofore been free of charge, it will not be easy to do so. It is necessary to conduct enlightenment activities, steadily enlarging the range of the participation of local community¹⁾.



Communal water tap



Communal water tap

¹⁾ At present, in some villages, the water management committee is functioning, residents are collecting water usage fees, and are managing to operate using those funds.

Ghana

Laboratory Diagnosis of Yellow Fever and Other EPI Viral Diseases (Polio and Measles)

Project Sites

Legon



1. Background of Project

Japan had provided the University of Ghana's Faculty of Medicine with technical cooperation since 1968. In FY1977 and FY1978, the Noguchi Memorial Institute for Medical Research (NMIMR), affiliated with the University of Ghana, was established through grant aid. Since FY1980, cooperation had been implemented in the three fields of virology, nutritional science and epidemiology. Subsequently, in 1989, the NMIMR was recommended by the World Health Organization (WHO) to the Expanded Program for Immunization (EPI) cooperation organization.

Based on such accomplishments, and in light of the necessity of technology dissemination for polio-related diseases in Africa and the leadership position of the NMIMR as a polio research institute in Africa, Japan and the WHO, from FY1991 to FY1995, embarked on their first multilateral cooperation project, implementing the third country training program on Vaccine Potency Testing and Polio Diagnostic Procedures at the NMIMR.

The training progressed smoothly and was a great success when the plan ended on schedule in FY1995. However, due to the overwhelming influence that yellow fever had in recent years in the Sub-Saharan African countries, the Government of Ghana requested the implementation of another third country training program, which had yellow fever as a central training issue, from Japan and the WHO.

2. Project Overview

(1) Period of Cooperation

FY1996-FY1998

(2) Type of Cooperation

Third country training program

(3) Partner Country's Implementing Organization

Noguchi Memorial Institute for Medical Research (NMIMR), University of Ghana

(4) Narrative Summary

1) Overall Goal

To contribute to the detection and eradication of yellow fever, polio and the measles in the countries that participate in training.

2) Project Purpose

For the trainees from the African countries which the WHO has designated as regions at risk for yellow fever to acquire diagnostic technology for yellow fever, polio and the measles.

3) Outputs

- For trainees to acquire basic knowledge on diagnosing yellow fever, polio and the measles and learn about standard testing skills conducted in the laboratory.
- To improve the knowledge and skills of the trainees towards valid testing of live vaccines for yellow fever, polio and the measles.
- For trainees to properly recognize the goal of controlling and eradicating yellow fever, polio and the measles in African regions, and to understand the role that the laboratories play in a successful process.

4) Inputs

Japanese Side

Short-term experts	2
Training expenses	10 million yen

WHO Side

Lecturers	5
Teaching materials	
Cooperation with the NMIMR in the planning of the curriculum	

Ghanaian Side

Lecturers	
Training facilities, equipment and teaching materials	

3. Members of Evaluation Team

JICA Ghana Office
(Commissioned to Fine Consult Ltd.)

4. Period of Evaluation

August 1998-December 1998

5. Results of Evaluation

(1) Efficiency

At the NMIMR facility, laboratories, libraries, special equipment and the like were well prepared. Consumables like reagents were sufficiently supplied by JICA and the WHO, in the case of shortage. At the NMIMR, in the five years since FY1991, the third country training program was implemented, and a management system was also established, this training was conducted very efficiently.

(2) Effectiveness

In the two years of FY1996 and FY1997, a total of 22 trainee-testing engineers, researches, professors from University medical departments and the like-selected from 11 African countries, including Ghana, completed the training. From the results of a test implemented during training, it was deemed that the trainees gained a high understanding from the content of the training. In a questionnaire survey implemented at the end of training in FY1997, approximately 80% of the trainees answered that the content of the training matched the goals and their expectations of the training.

(3) Impact

Trainees were able to acquire the opportunity necessary to accumulate vital technology and knowledge for their work, responding that training proved a great help to daily work. However, in a number of African countries which had participated in this training, due to a lack of capital and equipment, it is not always easy to sufficiently put into practice the technical skills acquired through the training¹⁾.

(4) Relevance

While measures for polio and the measles have been advancing in African countries, measures for yellow fever are still behind the times. To have effective cooperation between measures for polio, the measles and yellow fever is recognized as an international policy, and this necessity makes the training very relevant.

However, in the questionnaire survey taken at the completion of training in FY1997, many trainees replied that while their knowledge of laboratory diagnosis for infectious diseases and vaccine potency testing became substantial, in order to make use of the skills they acquired immediately after their return to their countries, more time on experimentation should be necessary.

(5) Sustainability

Though the training implementation ability of the NMIMR is satisfactory, it will be difficult for the Ghanaian side to implement the training with its own budget.

6. Lessons Learned and Recommendations

(1) Lessons Learned

In third country training programs, practical training in an environment that assumes the situation for the trainees after they return to their own countries should be incorporated in the curriculum in order to foster human resources that would readily serve as a useful workforce.



An expert giving a lecture



Practical training

¹⁾ There are some countries among those participating in the training that still do not possess surgeries with sufficient functions, but surgery laboratories are being developed through multilateral and bilateral cooperation. JICA is also cooperating.

Ghana

The Project for Rural Electrification for Asesewa and Yeji Area

Project Sites

Asesewa Area



1. Background of Project

The Government of Ghana has formulated the National Electrification Scheme aiming to provide electricity across the nation by 2020 as part of its National Development Policy Framework, and has just undertaken to provide electricity to each of its 110 district capitals. As the second business district in the Eastern Region, Asesewa is one of Ghana's most preeminent and largest market places, but because it is some distance away from the electrified district capital and because it is expensive to connect that area to national electricity grid, it had always been without electricity. Since the electrification of the area was essential in terms of promoting food and agricultural production, and increasing distribution to neighboring areas, the Government of Ghana requested grant aid from Japan for the electrification of the area.

2. Project Overview

(1) Period of Cooperation

FY1996

(2) Type of Cooperation

Grant aid

(3) Partner Country's Implementing Organization

Ministry of Mines and Energy, Electricity Company of Ghana (ECG)

(4) Narrative Summary

1) Overall Goal

To improve the standards of living of the residents of Asesewa area.

To activate the industries in Asesewa area.

2) Project Purpose

To provide a stable supply of electricity to the local citizens and industries in Asesewa area.

3) Outputs

- To construct 103.3 km of distribution lines.
- To establish transformers.
- To set up a low-voltage electricity distribution line network.
- To establish a system for the appropriate management of the distribution line facilities.

4) Inputs

Japanese Side

Grant	507 million yen (E/N amount)
-------	---------------------------------

Ghanaian Side

Survey and preparation of the allocated land for the establishment of the power lines.

Personnel and budget for the establishment of the low-voltage electricity distribution line network.

Personnel and budget for maintenance

3. Members of Evaluation Team

JICA Ghana Office

(Commissioned to Quans Inter-Continental Associates Ltd.)

4. Period of Evaluation

5 August 1998-26 October 1998

5. Results of Evaluation

(1) Efficiency

Because of the mutual cooperation among the Ministry of Mines and Energy, the ECG and the Japanese side, the project was implemented smoothly for the most part from the planning stage through to the completion of the construction work. This project was designed taking into consideration the basic nature of ECG's existing facilities and technology, as well as Ghana's ability to carry out maintenance and spare parts exchange on its own. Maximum efforts have been made to use Ghana's domestic contractors as well as to procure resources locally. The project was implemented as scheduled, except for the fact that the wooden telephone poles were procured locally three months later than the originally scheduled date.

(2) Effectiveness

The electricity line network and the transformers have been established, and the management situation of the facilities is good. At present, of the 21 target villages, a mere 471 households in Asesewa village have started to receive electricity owing to the fact that only five months have passed since the completion of the electricity power facility. However, the

remaining 20 villages will be supplied with electricity in due course.

(3) Impact

In the interviews with Asesewa's business people (welders, sewers, barbers/ hairdressers), they answered that as a result of the supply of electricity, they were scheduled to extend their business hours and improve their facilities by introducing electrically-operated appliances. They were also planning to extend their business operations. The supply of electricity has revitalized business activities such as the influx of traders from outside the area and furthermore, residents are able to enjoy an improved standard of living resulting from benefits such as increased safety in the area brought about by the spread of night-lighting as well as improved access to information by listening to the radio for longer periods of time.

(4) Relevance

Because this project is consistent with the Government of Ghana's nationwide electrification policy and the needs of the residents, the project is highly relevant.

(5) Sustainability

Along with the implementation of this project, an ECG office was established in Asesewa. 30 staff members will be managing the electricity power facility. The plan in the future is to have this electricity power facility run from the electricity payments made by its users and the ECG budget.



A newly installed transformer substation



Electric poles erected in a rural community

Ghana

The Project for Construction of Small Scale Bridges

Project Sites

Johol, Sayere, Tanodumase, Fum, Emuo, Draw, Nhwine

1. Background of Project

Local roads comprise 60% of Ghana's road network. Most of the bridges across these local roads were constructed with wood and because they grew old quickly, many of them had collapsed and been washed away. Even the bridges that still remained had low durability, thus placing the vehicles that passed over them at risk. The poor quality of bridges had hindered efficient transportation of Ghana's major agricultural products such as cacao and timber to consumption areas. Consequently, the local economy was having trouble getting activated.

Under these circumstances, the Government of Ghana requested grant aid from Japan in order to construct local small-scale bridges with the intended goal of activating the local economies in Ghana through the improvement of local road networks.

2. Project Overview

(1) Period of Cooperation

FY1996

(2) Type of Cooperation

Grant aid

(3) Partner Country's Implementing Organization

Ministry of Roads and Transport/Department of Feeder Roads (DFR)

(4) Narrative Summary

1) Overall Goal

To contribute to the activation of Ghana's local economies.

2) Project Purpose

To establish a local road network in Ghana.

3) Outputs

- a) To construct seven small-scale bridges.
- b) To construct connecting roads.
- c) To establish a system for the appropriate maintenance of the bridges.



4) Inputs

Japanese Side

Grant	994 million yen (E/N amount)
-------	---------------------------------

Ghanaian Side

Personnel and budget for the construction of connecting roads

Personnel and budget for the maintenance of the bridges and connecting roads

3. Members of Evaluation Team

JICA Ghana Office

(Commissioned to Quans Inter-Continental Associates Ltd.)

4. Period of Evaluation

5 August 1998-26 October 1998

5. Results of Evaluation

(1) Efficiency

Because this project incorporated technology that already existed in Ghana and it also procured the materials and machinery locally as much as possible, the efficiency level was high. From the planning stage through to the completion of the construction work, as a result of the mutual cooperation among the members of both the Japanese and Ghanaian sides, the implementation was smooth and the construction was completed as scheduled. The connecting roads for the bridges, which the Ghanaian side was responsible for, have all been completed, except for one.

In addition, the effects of the road construction process were taken into account, and detour routes and roads for the transportation of the construction materials and equipment were also established during the construction.

(2) Effectiveness

Of the seven small-scale bridges that were built during this project, at present, only one is not fully functional because of incomplete construction of connecting roads built by the Ghanaian side¹⁾. The remaining six are functional and open for use. The opening of these bridges enabled people to travel to

areas all year round that were previously inaccessible during the monsoon season owing to people travelling by boat on the rivers. Access to the market and cities was significantly improved. On market days, some of the bridges are utilized by more vehicles than calculated in the planning stage. The intended goal of the project is almost achieved.

(3) Impact

The loss of harvested crops has been reduced by five to twenty percent because the crops can be transported to the markets more easily by using the newly constructed bridges. Also, since the products can now be sold at the markets in a fresh condition, the prices have also increased. Consequently, some farmland areas have expanded by ten to fifteen percent from the time before the bridges were built, and the number of middlemen who come to the villages to buy the products has also increased. In the two areas where access to hospitals has been made possible by the construction of the bridges, the number of patients consulting doctors has increased.

Although it has only been five months since the completion of these bridges, the local residents living near those bridges are already enjoying the improvements in their living standards.

(4) Relevance

Not only is the linking of the rural villages' road network that was previously disjointed because of the rivers consistent with the Government of Ghana's policies, but it is also consistent with the local residents' needs. Thus, the relevance of this project is high.

(5) Sustainability

The DFR has an independent budget allocation for the maintenance of the bridges and also an excellent group of technical staff. Therefore, from now on, these bridges will be maintained under the supervision of the DFR on a regular basis.



Farmers had to cross the river by boat before the bridge was built



A bridge that has been constructed. Maintenance conditions are favorable.

¹⁾ As of June 2000, all bridges built under this project were opened and have been in use.

Kenya

Improved and Sustainable Agricultural Productivity for Women Farmers

Project Sites

Nairobi



1. Background of Project

In Kenya, 75% of the nation lives on small farms, and farming is a woman's responsibility by tradition. Therefore, dissemination of appropriate agricultural technology to the Kenyan women in rural villages became an urgent issue for increasing agricultural productivity, which is a national goal of Kenya. As a separate project, JICA implemented the Jomo Kenyatta University of Agriculture and Technology Project and nurtured leading agricultural human resources in Kenya. Research in terms of the appropriate technology was progressing under the project and a stage had been reached whereby this technology was to be disseminated nationally.

Given such background, the Government of Kenya requested that Japan implement in-country training program at the Jomo Kenyatta University of Agriculture and Technology for female leaders from rural villages.

2. Project Overview

(1) Period of Cooperation

FY1994-FY1998

(2) Type of Cooperation

In-country training program

(3) Partner Country's Implementing Organization

Jomo Kenyatta University of Agriculture and Technology (JKUAT)

(4) Narrative Summary

1) Overall Goal

The improvement of the livelihoods of small farmers from rural villages through the dissemination of knowledge and technology to rural regions for the development of agricultural productivity.

2) Project Purpose

Female trainees from rural villages acquire the knowledge and technological skills needed to improve sustainable agricultural productivity.

3) Outputs

- Trainees understand the necessity to improve the agricultural methodology.

- Trainees learn sustainable agricultural technology.
- Trainees understand the development of technologies befitting situations of various regions.

4) Inputs

Japanese Side

Training expenses	24.755 million Kenyan shillings (approx. 51 million yen)
-------------------	--

Kenyan Side

Instructors	21
Training facilities, machinery	
Training expenses	

3. Members of the Evaluation Team

Team Leader:

Mr. Kunihiro TOKITA, Development Specialist, JICA

Small-scale Irrigation:

Mr. Michihiko SAKAKI, Instructor, Tsukuba International Center, JICA

Training Design:

Mr. Nobuyuki KOBAYASHI, Second Program Division, Tsukuba International Center, JICA

4. Period of Evaluation

17 January 1999-30 January 1999

5. Results of Evaluation

(1) Efficiency

Instructors at JKUAT acted as instructors for more than 80% of the subjects for which training was offered. As training facilities and machineries are concerned, JKUAT's facilities were employed, and existing resources were put to effective use. Furthermore, JKUAT drew up an appropriate curriculum working to grasp the needs of the trainees by convening steering committees with instructors before and after the training courses and carrying out preliminary surveys conducted by instructors.

In FY1995, the period of training was reduced by ten days. This was by all accounts a tough curriculum for the trainees, but a curriculum whose content lived up to the expectations of

the trainees and that was maintained thanks to the efforts made by JKUAT.

(2) Effectiveness

In five years, a total of 242 people participated in the training. Many trainees responded to the questionnaire conducted every year by JKUAT at the conclusion of the training commenting that, "the structure of all training subjects was both useful and appropriate, and fulfilled our training needs." In this way, given that the degree of satisfaction of the trainees is high, it can be judged that the training is highly effective.

(3) Impact

After the end of the training, the trainees retransfer the knowledge and technology they have acquired by holding lectures and seminars targeting women farmers groups to which they belong. Moreover, those groups, which receive this retransfer of knowledge and technology, also conduct agricultural instruction at elementary and secondary schools in their regions while utilizing the training texts as teaching materials. As such, the dissemination of technology is steadily progressing.

The practical application of the agricultural technology acquired under this training resulted in larger harvests and there were responses from 30% of the trainees that their incomes had increased. The incomes of women farmers who received the retransfer of technology, also increased. Furthermore, trainees who had acquired new knowledge and technical skills gained greater respect and trust within the household, and were entrusted with work of greater responsibility in the home. Some trainees were even appointed to leadership positions in the village.

However, participation in this training was also seen to have some minor negative effects, such as sense of dependency on foreign assistance and outbreaks of discord within the groups to which they belong.

(4) Relevance

The fact that this training targeted female leaders from rural villages was relevant from the point of view of the continuity of technological transfer. In a total of five years, the fact that there were more than four times the number of applicants at 1,119 for the 250 fixed places can be considered a result of the training having matched the needs of the women farmers, and such training needs have always been demanding.

(5) Sustainability

When continuing this training, JKUAT will be able to provide the necessary instructors, training facilities, and machinery. Although JKUAT also possesses adequate capability in training management administration, ensuring individual budgets seems to be a problem as far as training expenses are concerned.

6. Lessons Learned and Recommendations

(1) Lessons Learned

When formulating training courses for women farmers, it



A training scene in the model field



A training scene in the model field

is essential that it is made clear at the planning stage whether the organization of training subjects be focused on agricultural technology or aimed at activities to improve the lifestyles of women farmers.

(2) Recommendations

In Kenya, needs for training targeting women farmers have always been high, but the Kenyan side is finding it difficult to ensure this budget. In future, it is desirable that JKUAT take the initiative in implementing independent training as part of the technological dissemination work of JICA's JKUAT project.

The Population Education Promotion Project Phase II

Project Sites

Kakamega District, Meru District



1. Background of Project

In Kenya, during the early years of independence, there was on average a 3.8% rapid increase in the population per year. This sharp increase in the Kenyan population hindered the sustainable development of the economy, as well as gave rise to social and environmental problems. For this reason, the Government of Kenya took up population control as the most important and urgent issue on its agenda and had been working actively to better the situation. In addition, the Government of Kenya requested Japan to implement project-type technical cooperation called The Population Education Promotion Project in order to help develop teaching materials contributing to population/family planning education. Japan implemented this project for five years starting from 1988. Furthermore, to ensure that the results of this project continue to be developed, Japan implemented Phase II of the same project starting from 1993 for a five-year period.

2. Project Overview

(1) Period of Cooperation

15 December 1993-14 December 1998

(2) Type of Cooperation

Project-type technical cooperation

(3) Partner Country's Implementing Organization

National Development Council for Population and Ministry of Information and Broadcasting, Kenya Institute of Mass Communication

(4) Narrative Summary

1) Overall Goal

To reduce the population growth rate in Kenya.

2) Project Purpose

To strengthen IEC (Information, Education and Communication) activities¹⁾ in the population by developing and disseminating appropriate multi-media strategies and enhancing community development.

3) Outputs

- a) Needs assessment is developed and a dissemination channel for multi-media materials is established.
- b) Subjects of multi-media materials including population

and development as well as mother-child health/family planning are diversified.

- c) Low-cost, handmade audiovisual aids and folk media are developed and disseminated.
- d) An integrated model of IEC activities and service delivery in the model communities is developed.
- e) The Project's outputs are expanded to other areas.

4) Inputs

Japanese Side

Long-term experts	10
Short-term experts	8
Trainees received	18
Equipment	164 million yen
Local cost	149,000 Kenyan shillings (approx. 1 million yen)

Kenyan Side

Counterparts	37
Offices for project, studio	
Local cost	800,000 Kenyan shillings (approx. 2 million yen)

3. Members of Evaluation Team

Team Leader:

Dr. Kenji HAYASHI, Professor, National Institute of Public Health

Media Education:

Mr. Masao YOSHIDA, Development Specialist, JICA

Evaluation Planning:

Ms. Harumi KITABAYASHI, Second Medical Cooperation Division, Medical Cooperation Department, JICA

Impact Analysis:

Ms. Ritsuko AIKAWA, Second Medical Cooperation Division, Medical Cooperation Department, JICA

4. Period of Evaluation

1 August 1998-13 August 1998

5. Results of Evaluation

(1) Efficiency

The experts transferred technology effectively to the counterparts, using the supplied equipment. However, due to personnel rotations, there was no chief advisor or a dissemination expert for a nine-month period. There were few personnel changes among the 37 allocated counterparts. Of the 18 trainees that received training in Japan, 15 of them are applying the technology they had acquired to project activities after they returned to Kenya. Unfortunately, the dissemination activities for population education were limited because the Kenyan side did not provide a driver for the audiovisual equipment van (AV van).

(2) Effectiveness

The technology for producing videos and printed teaching materials as well as high standard publications was transferred. Folk media²⁾ and printed materials were used as effective means for the dissemination activities for population education. The video teaching materials that were produced during this project were used in the model community for seminars targeting the regional leaders. Seminars were held 30 times at the Enzaro Health Center, and five times at the Kibirichia Health Center. In addition, microteaching (educational activities provided for patients during their wait in health centers) was implemented 241 times at the Enzaro Health Center (total of 6215 people) and 714 times at the Kibirichia Health Center (total of 20,669 people). Through these activities, the health services for local residents improved greatly and they promoted the spread of these activities to neighboring regions. Excluding dissemination activities using the AV van, the intended project purpose has been achieved at a high standard.

(3) Impact

Through this project, there have been remarkable advances in the quality and quantity of the media teaching materials. The television program on measures against AIDS that was produced during the cooperation period won the Grand Prize and First Prize of UND category. The video teaching materials produced under this project were presented to the parliament, ministries, international organizations and the project activities were widely acknowledged.

It is thought that this project contributed to the fact that the Kenyan population growth rate decreased from 3.4% from 1979-1989 to 2.9% from 1989-1999.

(4) Relevance

Putting accent on the issue of population control, the Government of Kenya is carrying out National Population Advocacy and IEC Strategy for Stable Development, 1996-2000 which is a policy that emphasizes problems of the environment, gender and poverty, and also promotes special consideration for the elderly, disabled and youth. Japan's project is structured to follow the policies of the Government of Kenya, therefore it can be said that the project is relevant to the Kenyan situation.

(5) Sustainability

This project can now technically be maintained independently. However, because financial difficulties still

remain for managing the project, it is necessary to consider certain measures such as taking advantage of the technology that has been transferred for producing teaching materials in order to produce them on a commercial basis. Also, since it is costly to implement dissemination activities through the AV van, it is desired that the use of folk media be expanded further.

6. Lessons Learned and Recommendations

(1) Lessons Learned

The Government of Kenya was used to the Western style of cooperation where the organization that the donor appointed would implement the project for the partner country. Therefore, it should be difficult for the Government of Kenya to understand JICA's technical cooperation style where technology transfer to the counterparts was emphasized. When implementing cooperation projects in Kenya, it is necessary to pay attention to this problem in project planning, administrative management and various related aspects.

(2) Recommendations

The Kenyan side is requesting the extension of the work term of the two experts (in charge of printing media and dissemination activities) and financial support to spread the community development activities to other regions. The prolonged stay of the experts should be considered after the Government of Kenya clarifies the specific work content of the experts during the extended period. Though it is difficult for JICA to give financial support for the dissemination of community development activities, other methods of expansion need to be considered so that the results of this project can be spread to other regions.

¹⁾ Information, Education and Communication activities: In a development movement that provides basic services in social development, in particular mother-child health, population family planning, measures against AIDS, water supply and hygiene and basic education, IEC activities are used to promote the deeper understanding of the users for these services and to encourage them to use these services.

²⁾ A method of conveying educational messages pertaining to population/AIDS by using traditional songs and dances from the region.

The Community Health Sciences Project

Project Sites

Lilongwe, Salima



1. Background of Project

Under-five mortality caused by infectious diseases was high in Malawi, and the establishment of countermeasures became major health policy issues. In 1988, with a loan from the World Bank, the Government of Malawi established the Community Health Sciences Unit (CHSU). CHSU was established with the main aim of controlling infectious diseases through public health laboratory service, epidemiological methods and disease control programmes. However, the unit did not make a sufficient impact due to the low level of diagnostic technology and a lack of human resources.

Amid these circumstances, the Government of Malawi requested project-type technical cooperation from Japan for the purpose of strengthening CHSU functions. As a result, the JICA-CHSU Project was launched in September 1994.

2. Project Overview

(1) Period of Cooperation

1 September 1994-31 August 1999

(2) Type of Cooperation

Project-type technical cooperation

(3) Partner Country's Implementing Organization

Community Health Sciences Unit (CHSU)

(4) Narrative Summary

1) Overall Goal

The mortality in the model area (especially mortality of children under five years old) is reduced.

2) Project Purpose

The functions of CHSU, as the national institute of health with the main emphasis on infectious diseases, are strengthened.

3) Outputs

- The technical level at CHSU in the examination and detection of microorganisms are improved.
- An epidemiological surveillance network¹⁾ in the model areas is established.
- A referral function²⁾ between CHSU and the hospital in the model area is established.

4) Inputs

Japanese Side

Long-term experts	10
Short-term experts	15
Trainees received	12
Trainees dispatched to third country	2
Equipment	174 million yen
Local cost	63 million yen

Malawi Side

Counterparts	16
Offices for project	
Local cost	6.535 million kwacha (approx. 18 million yen)

3. Members of Evaluation Team

Team Leader:

Dr. Takatoshi KOBAYAKAWA, Professor and Chairman, Department of International Affairs and Tropical Medicine, Tokyo Women's Medical University

Medical Technology:

Dr. Shinichiro WATANABE, Professor, Department of Clinical Chemistry, Tokyo Women's Medical University

Epidemiology/Surveillance:

Dr. Satoshi KANEKO, Department of Clinical Epidemiology, Research Institute of Industrial Ecological Science, University of Occupational and Environmental Health, Japan

Project Evaluation Planning:

Mr. Harumi KITABAYASHI, Second Medical Cooperation Division, Medical Cooperation Department, JICA

Project Management:

Ms. Akiko TSUTSUMI, Second Medical Cooperation Division, Medical Cooperation Department, JICA

4. Period of Evaluation

10 November 1998-25 November 1998

5. Results of Evaluation

(1) Efficiency

Through this project, technology transfer of an appropriate

level for Malawi was carried out, including third country procurement of equipment and participation by counterparts in third country training.

However, since this was the first time that Japan's project-type technical cooperation had been implemented in Malawi, there was scarce mutual knowledge of the related organizations, systems and national characteristics between Japan and Malawi, and due to insufficient communication there were obstacles to the operation of the project. In addition, the lack of assignment of counterparts possessing sufficient abilities, frequent transferring and a lack of awareness regarding the idea of sharing technologies among counterparts posed difficulties for organizational transfer of technology. The late arrival in Malawi of the supplied equipment also hampered the efficiency in transferring technology.

(2) Effectiveness

Through the installation of new research laboratories and the introduction of a referral system and surveillance network, the CHSU's testing functions and functions for referral with the model area were strengthened and capabilities of staff improved to the point where they could prepare and submit the research reports by themselves.

However, regarding the construction of the epidemiological surveillance network in the model area, technology transfer has not been completed due to the fact that there were no counterparts with sufficient ability and that construction started in the fifth and final year of cooperation.

(3) Impact

The overall goal of reducing infant mortality rates has not been gauged over the short cooperation period of five years. However, a variety of impacts have appeared through the implementation of the project.

Technologies for separation and identification of pathogenic bacteria that cause bacterial infectious diseases such as infectious diarrhea and epidemic meningitis and drug sensitivity tests were transferred to hospitals in the model area. As for tuberculosis, which is highly important in its connection with HIV infection, identification of tuberculosis bacteria and drug sensitivity tests were carried out, and early detection and early treatment became possible. An effort was made to enhance testing items in clinical biochemistry tests, which included HIV and HBs antigens, etc., in addition to basic biochemical items. Moreover, the distribution of chemical reagents to model area hospitals and the epidemiological research and technical instruction to model area hospitals have been implemented.

(4) Relevance

Because the infant mortality caused by infectious diseases still remains high in Malawi, the Ministry of Health is attaching importance to countermeasures against infection. This project is consistent with the Ministry's policies and is deemed as relevant.

(5) Sustainability

The transfer of testing technology and the referral system are for the most part completed. However, more improvement is needed regarding the surveillance system. At the present stage, sustainability by the Malawi side is difficult. Continued



Basic study on parasitic infection targeting schoolchildren in the model region

assistance is necessary in terms of budget and improvement of human resources.

6. Lessons Learned and Recommendations

(1) Lessons Learned

Healthy communication between the persons involved is important for the smooth implementation of project activities.

(2) Recommendations

When considering the degree to which the project purpose has been achieved and sustainability, it is thought that follow-up cooperation for about one year will be necessary.

7. Follow-up Situations

Based on the above recommendations, one year of follow-up cooperation is being implemented until August 2000.

¹⁾ A system for the collection of data on the outbreak of certain epidemics, the observation of outbreak trends, and the establishment of measures against infectious diseases

²⁾ System in which specimens are sent from the testing lab of the model area to the CHSU lab, and results of the CHSU research are fed back to the testing lab of the model area

Malawi

The Research Project for Small-Scale Aquaculture of Malawian Indigenous Species

Project Sites

Domasi



1. Background of Project

The fisheries industry is extremely important in Malawi because it provides the people with 70% of their animal protein intake. However, due to declining fish breeding grounds, overfishing and rapid human population growth estimated at 3% per year, the per capita consumption of fish decreased from 12kg per person in 1972 to 7kg per person in 1992. Additionally, in 1992 it became forbidden to introduce foreign species in Lake Malawi in order to preserve the indigenous species.

Under these circumstances, the Malawi Government requested project-type technical cooperation from Japan in order to improve the small-scale aquaculture of Malawian indigenous species.

2. Project Overview

(1) Period of Cooperation

1 April 1996-31 March 1999

(2) Type of Cooperation

Project-type technical cooperation

(3) Partner Country's Implementing Organization

Ministry of Forestry and Fisheries' and Environmental Affairs (Ministry of Natural Resources and Environment Affairs), National Aquaculture Center in Domasi

(4) Narrative Summary

1) Overall Goal

Suitable technology for small-scale aquaculture of Malawian indigenous fish species is developed.

2) Project Purpose

The suitability of some Malawian indigenous fish species for small-scale aquaculture is clarified.

3) Outputs

- Methods of production for each selected indigenous fish species are determined.
- Suitable feed for each selected fish species is determined.
- Appropriate rearing techniques for each selected fish species are determined.

4) Inputs

Japanese Side

Long-term experts	3
Short-term experts	9
Trainees received	7
Equipment	61.8 million yen
Local cost	44 million yen

Malawi Side

Counterparts	13
Facilities (offices for experts, laboratory, cultivation ponds)	
Local cost	10.169 million kwacha (approx. 27.15 million yen)

3. Members of Evaluation Team

Team Leader:

Mr. Ryo KUROKI, Managing Director, Forestry and Fisheries Development Cooperation Department, JICA

Freshwater Fishculture:

Mr. Toshiaki YADA, Director, Osaka Prefectural Freshwater Fish Experiment Station

Cooperation Evaluation:

Mr. Koji WATANABE, International Affairs Division, Fisheries Agency, Ministry of Agriculture, Forestry and Fisheries

Evaluation Planning:

Mr. Hiroyuki TANAKA, Fisheries Cooperation Division, Forestry and Fisheries Development Cooperation Department, JICA

Evaluation Analysis:

Mr. Wataru TAKADA, CRC Overseas Cooperation, Inc.

4. Period of Evaluation

20 September 1998-4 October 1998

5. Results of Evaluation

(1) Efficiency

Inputs from the Japanese side were appropriate in terms of quality, quantity, and time. On the Malawi side, counterparts were placed according to plan, and the local cost was borne

adequately using counterpart funds of Japan's aid for increasing food production. Technology was successfully transferred and efficiency was increased, because there was little staff turn over on the counterparts.

(2) Effectiveness

Through this project, the necessary facilities and equipment for research, such as a model hatchery and testing instruments were established, and the suitability of cultivation of three fish species (*O. shiranus*, *T. rendalli*, *C. gariepinus*) was investigated. It was therefore determined that this project achieved its objective.

(3) Impact

The counterparts increased their research capabilities by acquiring not only knowledge and techniques but also a research perspective emphasizing fundamental techniques and on-site experimentation.

(4) Relevance

Declining fish catch has had a negative impact on Malawian. The development of small-scale aquaculture technology for indigenous species in accordance with social conditions is important for improving the lives of people in Malawi. The relevance of this project is high.

(5) Sustainability

Research facilities and equipment for the National Aquaculture Center in Domasi was established, and counterparts acquired the minimum basic knowledge and skills necessary to conduct research activities in the field of cultivation. However, it is unlikely that the Malawi side would be able to continue this research independently.

Financially, because the majority of the local cost for this project borne by the Malawi side came from counterpart funds of aid for increase of food production, from a long-term perspective, it is hoped that funds allocated to this project from the Malawi government's revenue account will be increased. The National Aquaculture Center in Domasi has independent sources of revenue such as the sale of young fish and the sale of adult fish that have been produced through research cultivation. If a system to manage revenue from these sales was established, then the project would be self sustaining.

6. Lessons Learned and Recommendations

(1) Recommendations

Based on the results of this project, it is recommended that, in future, Phase II cooperation be implemented immediately after the end of this project, in order to develop small-scale aquaculture of Malawian indigenous species

7. Follow-up Situations

Based on the results of this project, project-type technical cooperation entitled "The Project on Aquaculture and Technical Development of Malawian Indigenous Species" is currently being implemented for a planned period of five years starting from April 1999, for the purpose of establishing seedling-production technology for new cultivated species and developing



Sampling of cultivated test fish at the Domasi Center



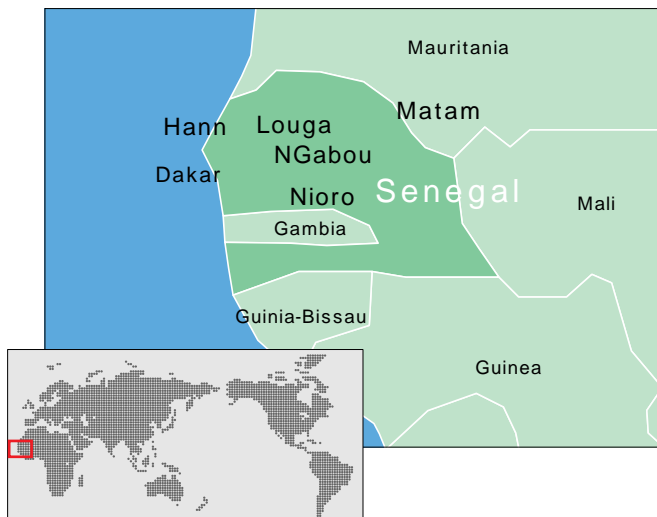
Sampling of cultivated test fish at the Domasi Center

appropriate cultivation techniques for species already being cultivated.

The Nursery Establishment Project

Project Sites

Hann, Louga, N'Gabou, Nioro, Matam



1. Background of Project

Located at the southern boundary of the Sahara desert, Senegal had experienced a 20% reduction in its forest resources over the last 20 years as a result of a decline in rainfall, expansion of farmland according to population growth, high consumption of wood and charcoal resources, and the degradation of plant life due to too much grazing. Therefore, the Senegalese government formulated in its national development plan an afforestation plan to try to preserve forest resources and protect the natural environment, and was trying to improve nurseries for the production of fine seedlings and to propagate the technique of seedling cultivation.

Against such a backdrop, the Senegalese government, in order to increase the capabilities for seedling cultivation, requested grant aid from Japan to improve five nurseries.

2. Project Overview

(1) Period of Cooperation

FY1995 and FY1996

(2) Type of Cooperation

Grant aid

(3) Partner Country's Implementing Organization

Ministry of Environment and Nature Protection

(4) Narrative Summary

1) Overall Goal

To increase the amount of seedling production and to promote afforestation activities.

2) Project Purpose

To improve the capabilities for seedling cultivation.

3) Outputs

- a) To establish five nurseries.
- b) To provide seedling cultivation tools.
- c) To conduct office facilities.

4) Inputs

Japanese Side

Grant

899 million yen
(E/N amount)

Senegal Side

Land

Personnel for facility maintenance

Local cost

3. Members of Evaluation Team

JICA Senegal Office

(Commissioned to ENDA-SYSPRO)

4. Period of Evaluation

15 February 1999-20 March 1999

5. Results of Evaluation

(1) Efficiency

The construction of five seedling nurseries and the establishment of related materials were smoothly enacted. As almost all of the construction materials were supplied locally, and chosen machines can be repaired locally, this project was implemented efficiently.

(2) Effectiveness

Through the construction of nurseries and the establishment of related machinery, capabilities for seedling cultivation were largely increased. After the five established nurseries were handed over to the Senegal side in March 1997, seedling cultivation began. The number of seedlings being cultivated after the implementation of the project was 3.2 times the number before the project, resulting in the cultivation of 1,070,000 new seedlings per year, exceeding the expectation of 800,000 seedlings per year in the original plan. However, because there was a shortage of water for irrigation at the N'Gabou nursery, measures such as digging new wells would be necessary to activate it to full function. (In FY1999, an adequate water supply was secured through improvements made to existing wells.)

(3) Impact

Because the Louga nursery did not have sufficient funding to operate just after it was handed over, productivity was held to only 60% of the original plan, but in the following year, when it became able to produce the planned number of

seedlings like the other nurseries, systematic seedling cultivation was able to be implemented. An afforestation project that utilizes the seeds produced at the nurseries has begun through cooperation with local organizations and NGOs, and afforestation activities are spreading through the region. Also, tours in which teachers and children from local schools visit the nurseries are being conducted. They serve as places of environmental education where children can learn about the significance of afforestation and the cultivation of seedlings.

(4) Relevance

Because Senegal has a great need for seedling cultivation to stop desertification, the improvement of nurseries that can supply seedlings to a wide range of domestic areas has great relevance.

(5) Sustainability

As this project accords with the afforestation plan based on the national development plan, the direction of water, forestry, hunting and soil conservation, the Ministry of Environment and Nature Production, which manages nurseries throughout the country, assists them in both managerial and technical aspects. Under the guidance of an individual expert dispatched to the direction to act as a seedling cultivation advisor, the Senegal side's capability to manage the nurseries has increased.

Projects in collaboration with local organizations and NGOs have also been initiated, and the awareness of local residents toward becoming involved with afforestation activities has been heightened. As a result, sustainability of this project can be highly expected.

6. Lessons Learned and Recommendations

(1) Lessons Learned

Because securing the necessary water supply is a major prerequisite for the establishment of nurseries in dry areas, it will be important to secure water resources, as was done in this project, and it will also be necessary to pay close attention to the reservation of adequate water supplies.

(2) Recommendations

The prevention of desertification is the most important environmental cooperation activity in countries south of the Sahara, and continual implementation is hoped for. Specifically, along with developing seedling cultivation sites throughout Senegal, it is necessary to promote technical cooperation in order to spread the cultivated seedlings.

7. Follow-up Situations

In order to facilitate afforestation activities in rural areas, the project-type technical cooperation on the "Integrated Community Forestry Development" began in January 2000 at nurseries established through this project, and even more effective afforestation activities are progressing.



A scene of seedling cultivation with the cooperation of local residents (the Matam nursery)



Seedling cultivation in pool-type seedbeds (the Niuro nursery)

The Extension Program of the Bagamoyo Irrigation Development Project

Project Sites

Bagamoyo



1. Background of Project

The Coast Region in Tanzania is blessed with the fertile land of river and lake basins, but because irrigation and production technology had not been developed, agricultural productivity was low and the region was one of Tanzania's poorest. For this reason, Japan dispatched two individual experts to implement a survey of the development of irrigated farmland in the Ruvu river basin. For three years since November 1990, through the expert team dispatch program, Japan had implemented aid in experimental field development, test cultivation of rice and vegetables, and training of farmers, which had resulted in an increase in the yield of rice crops.

Based on these successes, the Regional Development Director of Coast Region began Phase II of this program, the development of a larger-scale pilot field, and requested continued cooperation from Japan.

2. Project Overview

(1) Period of Cooperation

1 July 1995-30 June 1998

(2) Type of Cooperation

Expert team dispatch program

(3) Partner Country's Implementing Organization

Ministry of Agriculture and Cooperatives, Regional Development Director of Coast Region

(4) Narrative Summary

1) Overall Goal

To improve food productivity in the Ruvu river basin
To improve the livelihood of farmers.

2) Project Purpose

To increase the yield of rice in the pilot field (100 hectares).

3) Outputs

- a) To establish irrigation facilities and equipment.
- b) To implement training (raising of seedlings, preventing disease and insect damage, management of irrigation water, and post-harvest technology) targeting extension workers.

- c) To establish farming organizations and circulation mechanisms.

4) Inputs

Japanese Side

Long-term experts	5
Short-term experts	4
Trainees received	6
Equipment	29 million yen
Local cost	

Tanzanian Side

Counterparts	
Land, buildings and materials presented	
Local cost	

3. Members of Evaluation Team

JICA Tanzania Office
(Commissioned to Wise Associates)

4. Period of Evaluation

20 November 1998-10 January 1999

5. Results of Evaluation

(1) Efficiency

As Tanzania is impoverished financially, Japan was requested to bear the majority of the cost of this project. Also, as an effect of the heavy rains due to El Nino, some riverbanks and irrigation facilities were destroyed, necessitating additional expenses for the restoration. Therefore, in addition to the materials and machinery expenses of about 30 million yen, the total expenses for this project has reached about 100 million yen.

(2) Effectiveness

Development of the 100 hectare pilot field and the settlement of 200 farming families on the land has generally been completed. As a result of the establishment of irrigation facilities and the training of counterparts and more than 160 farming families, the skill level of the counterparts and farmers concerning irrigation agriculture has improved, and consciousness of irrigation agriculture has increased as well.

The farmers actively participated in the construction and maintenance of the irrigation facilities, and the Tegemeo Farmers Irrigation Cooperative Society (TFICS) was organized by the 160 families.

Through the introduction of irrigated rice cultivation, rice yields have increased from the average of 1.5 tons per hectare obtained by traditional rainwater cultivation, to 5.5 tons per hectare, and have even reached 7.4 tons per hectare in some cases. In addition, farmers who received training have increased their yields even using only rainwater to 2.5 tons.

(3) Impact

The increase in the amount of rice harvested has brought higher income for the farmers, improvements in their living environments, and better education for their children. As 65% of the members of the TFICS are women, including the cooperative's vice-chairperson, and women are also participating at the decision-making level, gender considerations are being made.

(4) Relevance

As the improvement of agricultural productivity and food self-provision rates is the most important issue facing the Tanzanian government, this project is relevant from the perspective of responding to the needs of small-scale farmers.

However, the pump irrigation method introduced by this project is costly, and in terms of sustainable and extensive use, there are difficulties in its diffusion as a small-scale irrigation method for small Tanzanian farmers.

(5) Sustainability

TFICS collects project implementation fees (including irrigation costs, tractor costs, agricultural chemical and fertilizer costs) from each family during each harvest, and there is a possibility that this project can be managed through these collected fees. However, because debt-management consciousness at TFICS is low, there remain concerns about its management in the future.

6. Lessons Learned and Recommendations

(1) Lessons Learned

In order to spread the successes of a project to neighboring areas, it is important to formulate a plan for the use of technology that can be applied locally at low cost in terms of sustainability and extensive usability.

(2) Recommendations

The project's purpose was generally met; however, follow-up in the form of individual expert dispatch is necessary for technical guidance of not only rice cultivation but other field crops, and also for management of TFICS.



Japan's efforts considerably boosted the rice yields



Farmers threshing harvested rice

Tanzania

Dar es Salaam Power Distribution Maintenance Project

Project Sites

Dar es Salaam



1. Background of Project

Dar es Salaam is the center of Tanzania's industry and economy, with a population of 2 million. The city consumes 45% of the nation's electricity consumption, and for the development of Tanzania's social and economic activities, stable supply of electricity to the city is absolutely vital.

The supply of electricity to the city was taken on by the Tanzania Electric Supplies Company (TANESCO), but due to TANESCO's poor distribution facilities and its insufficient maintenance, frequent power failures had occurred, which were a large obstacle to the city's activities.

The Tanzanian government used Japan's grant aid to advance the improvement of TANESCO's power supply facilities, but because of their insufficient maintenance technology, with the goal of improving the technology, the Tanzanian government requested the implementation of this project from Japan.

2. Project Overview

(1) Period of Cooperation

15 January 1996-14 January 1999

(2) Type of Cooperation

Expert team dispatch program

(3) Partner Country's Implementing Organization

Tanzania Electric Supplies Company (TANESCO)

(4) Narrative Summary

1) Overall Goal

To secure the stable electric supply of Dar es Salaam Metropolitan Area.

2) Project Purpose

To improve TANESCO's maintenance technology.

3) Outputs

- For TANESCO personnel to acquire technology to conduct periodical checks on wiring.
- To improve basic work practices such as acquiring skills for reorganizing and arranging maintenance tools and materials.

4) Inputs

Japanese Side

Long-term experts	5
Short-term experts	3
Trainees received	3
Equipment	26 million yen

Tanzanian Side

Counterparts secretary, typist	4
Project Staff Office	37
Local cost	

3. Members of Evaluation Team

JICA Tanzania Office
(Commissioned to Dar es Salaam Institute of Technology)

4. Period of Evaluation

26 October 1998-31 January 1999

5. Results of Evaluation

(1) Efficiency

Due to the fact that detailed studies were conducted at the preparatory stages, the dispatch of experts and the supply of equipment were able to implement before schedule. While the materials TANESCO supplied were not sufficient, the Japanese side granted adequate material contents and the technology transfer was implemented efficiently.

In this project, all personnel would be assembled at the leaders daily, and would jointly share their opinions about problems and their solutions at the workplace. Such means were new to the work culture of Tanzania, and led to an improvement of the personnel's attitude towards work and pride in their work, which was effective in order to implement technology transfer effectively.

(2) Effectiveness

Through the energetic and appropriate guidance of experts and the highly motivated efforts of Tanzanian counterparts,

maintenance technology for distribution lines has been effectively transferred and TANESCO's technology level has significantly improved.

The counterparts have not only acquired skills for maintenance technology, but have also manufactured fundamental tools and materials by themselves making reference to the newest electric wire maintenance equipment provided through this project.

(3) Impact

As the maintenance skills of TANESCO were improving, voltage has been stabilized, and power failure has been dissolved in the regions involved in the project. The citizens of Dar es Salaam now have more trust in TANESCO.

With voltage stabilized and the problem of blackouts resolved, in the future there will be even more social and economic activity in Dar es Salaam and it can be expected that this will link to an increase in TANESCO's profits.

(4) Relevance

For the development of Tanzania's social and economic activity, stable supply of electricity to Dar es Salaam which is at the heart of Tanzania's industry and economy is indispensable.

A great amount of importance and necessity is placed on maintenance of distribution networks and the high relevance of this project has been determined.

(5) Sustainability

Through this project, since the technical capabilities of counterparts have improved, and the provided equipment is compatible in a tropical environment, it is thought that it will be possible to continue the maintenance activities of the distribution network with TANESCO's self-help efforts.

6. Lessons Learned and Recommendations

(1) Lessons Learned

Sharing opinions among those involved in regard to the problems and solutions of a project's activities will lead them to aggressively tackle a project. This method will be effective in conducting technology transfer efficiently.



Counterparts changing an electric pole



Counterparts carrying out maintenance activities

Tanzania

The Kilimanjaro Agricultural Training Center Project

Project Sites

Moshi



1. Background of Project

Since the 1970s, Japan had implemented various types of cooperation in the province of Kilimanjaro in order to establish and disseminate irrigated rice cultivation technology. As a result, the project had achieved remarkable results: the rice harvest in the target region of cooperation had reached six to seven tons per hectare, irrigated rice cultivation had spread to surrounding areas, and farmers had voluntarily created organizations and constructed irrigation facilities.

To spread the effects of this cooperation throughout Tanzania, the Tanzanian Government, which evaluates this cooperation very highly, requested this project for the purpose of strengthening the training function of the Kilimanjaro Agricultural Training Center for agricultural engineers in the field of irrigated rice cultivation.

2. Project Overview

(1) Period of Cooperation

1 July 1994-30 June 1999

(2) Type of Cooperation

Project-type technical cooperation

(3) Partner Country's Implementing Organization

Ministry of Agriculture and Cooperatives

(4) Narrative Summary

1) Overall Goal

The level of technology related to irrigated rice cultivation for Tanzanian training instructors, extension workers, water management personnel, agricultural machinery personnel and core farmers is increased.

2) Project Purpose

The training function of the Kilimanjaro Agriculture Training Center regarding rice cultivation is strengthened.

3) Outputs

- The level of technology regarding irrigated rice cultivation in training instructors is improved.
- Training methods related to irrigated rice cultivation are improved.
- Training materials related to irrigated rice cultivation

are developed.

- To conduct training in irrigated rice cultivation for government personnel and core farmers is conducted.
- Dissemination methods for the improved irrigated rice cultivation techniques are proposed.

4) Inputs

Japanese Side

Long-term experts	11
Short-term experts	36
Trainees received	19
Equipment	194 million yen
Local cost	200 million yen

Tanzanian Side

Counterparts	34
Facilities	
Local cost	8 million yen

3. Members of Evaluation Team

Team Leader:

Mr. Michio SAKAYANAGI, National Farmers Academy, Ministry of Agriculture, Forestry and Fisheries

Vice Team Leader:

Mr. Masataka NAKAHARA, Director, Agricultural Technical Cooperation Division, Agricultural Development Cooperation Department, JICA

Rice Cultivation/Dissemination/Agricultural Machines:

Ms. Kimiko ISHIKAWA, Deputy Director, Extension and Education Division, Agricultural Production Bureau, Ministry of Agriculture, Forestry and Fisheries

Water Management:

Mr. Akihiro WATANABE, Deputy Director, Design Division, Construction Department, Agricultural Structure Improvement Bureau, Ministry of Agriculture Forestry and Fisheries

Technical Cooperation:

Ms. Mayumi ANDO, Agricultural Technical Cooperation Division, Agricultural Development Cooperation Department, JICA

Evaluation Analysis:

Mr. Jiro IGUCHI, Padeco Co., Ltd.

4. Period of Evaluation

18 January 1999-31 January 1999

5. Results of Evaluation

(1) Efficiency

The quality of the long- and short-term experts and the timing of their dispatch were appropriate, and equipment was also provided in a timely manner. As the placement of the counterparts and the provision of training facilities were also performed according to plan, efficiency was high.

Due to the severe financial circumstances imposed by Tanzania's structural adjustment policy, the Tanzanian side became unable to bear the local cost, and it was necessary for the Japanese side to cover costs not included in the original plan. However, because this project responded flexibly to these conditions, it was able to operate smoothly, and as a result, attained a high level of efficiency

(2) Effectiveness

Between 1995 and 1998, when this evaluation was performed, 1,031 people had completed training at the Center, and the ability of the Center to conduct training had improved. In the future, strengthening the counterparts' ability to formulate training programs and upgrading the content of the training by monitoring its impact will become important issues.

(3) Impact

According to the results of an interview survey, the improved technology studied at the Center enabled agricultural technicians to improve the level of irrigated rice cultivation technology, resulting in a doubling of the rice harvest per unit area, and those who had completed the training were able to disseminate the technology to local farmers. Therefore, it appears as though this project has great technological impact. The project also has favorable impact on the environment and the rural community in the project area; with the cash acquired from rice cultivation, residents were able to refurbish their houses and gain access to improved health and education services.

(4) Relevance

As this project's goal accords with Tanzania's present agricultural policy, it is judged to be relevant.

(5) Sustainability

Although financial problems have presented an obstacle to independent operation of the Center, it has become the most important training facility for rice cultivation in Tanzania, and is currently strengthening its ties with research institutions. If the counterparts are able to apply their newfound knowledge and skills to the actual resolution of problems, sustainability will be further increased.

6. Lessons Learned and Recommendations

(1) Lessons Learned

Since it will not be easy to secure operating costs as part of financial strengthening for the project in Tanzania, which is



Plowing with a water buffalo

currently undergoing structural adjustment policies, it will be important to conduct public relations activities aggressively, forge relationships with international organizations, and accept commissions for work.

(2) Recommendations

It will be necessary to extend the cooperation period for two years in order to contend with remaining problems.

7. Follow-up Situations

Based on the above recommendation, the cooperation has been extended for a period of two years until June 2001 in order to conduct training for ex-trainees, monitor the effects of training, and to improve the training content based on feedback from these activities.

Kafue National Park Management Plan Project

Project Sites

Kafue National Park



1. Background of Project

Due to the fact that there was no consistent management plan and its implementation system for Kafue National Park, the oldest and most expansive national park in Zambia, an increase in poaching and logging by the area residents changed the unique ecosystem and raised concerns that rare animals would further decrease in number or become extinct. The "Zambia National Parks and Wildlife Five-Year Plan", established in 1993, raised the creation of a management plan for the park as an issue of the highest priority.

Japan had implemented technical cooperation through dispatching Japan Overseas Cooperation Volunteers to the park since 1987 and one expert to survey wildlife since 1993. Under these circumstances, the Zambian government requested expert team dispatch program from Japan in order to create a management plan for the park that also considered the symbiosis with the people living in proximity to the park.

2. Project Overview

(1) Period of Cooperation

15 April 1996-14 April 1999

(2) Type of Cooperation

Expert team dispatch program

(3) Partner Country's Implementing Organization

Ministry of Tourism, Department of National Parks and Wildlife Service

(4) Narrative Summary

1) Overall Goal

To improve the management and preservation of Kafue National Park.

2) Project Purpose

To decide on a Kafue National Park Management Plan.

3) Outputs

- a) To implement a survey of the ecology and distribution of the main types of plants and animals in Kafue National Park.
- b) To consider a draft National Park Management Plan based on the results of the survey.

- c) To hold workshops about the draft National Park Management Plan.

4) Inputs

Japanese Side

Long-term experts	3
Short-term experts	10
Trainees received	16
Equipment	36 million yen
Local cost	11 million yen

Zambian Side

- Counterparts
- Land and facilities
- Local cost

3. Members of Evaluation Team

JICA Zambia Office
(Commissioned to Mano Consultancy Services Ltd.)

4. Period of Evaluation

25 January 1999-19 March 1999

5. Results of Evaluation

(1) Efficiency

This project attempted technology transfer through a "team-to-team" format. Although it required more time compared to the usual "one-to-one" technology transfer, teamwork consciousness was brought about and foundations of the activities were prepared, which effectively contributed to the efficient implementation of work on deciding the national park management plan. Also, the method of training counterparts through practical work on the actual park management plan was extremely effective in appropriately transferring the technology necessary for the planning.

(2) Effectiveness

The counterparts acquired technology in environmental surveying and national park management planning, and prepared a final draft version of the Kafue National Park Management Plan, showing that this project has accomplished its objectives. It is of great significance that this national park management

plan, in contrast to other plans formulated by foreign experts, was created entirely by the Zambian staff, with support from Japanese experts.

(3) Impact

The formation of a park management plan was a large step, and if this plan is actually implemented in the future, it can be expected that even the overall goal of "Improvement in the Management and Preservation of Kafue National Park" can be achieved.

Additionally, because through this project the Zambian side furnished the skills to formulate a national park development plan by themselves, it is expected that they could also formulate and revise management plans for other national parks.

(4) Relevance

The management and preservation of Kafue National Park and the improvement of skills to accomplish it are priority policies with the Zambian government. Although the result of this project, the draft national park management plan, seems to lack in financial analysis, technically it is generally appropriate, and it is hoped that there will be a move towards its implementation.

(5) Sustainability

The full acquisition by the counterparts of skills concerning national park management planning and the formation of ownership will contribute greatly to an increase in sustainability in a technical aspect. On the other hand, the financial situation of the Zambian government is tight, and it would be difficult to implement the formulated national park management plan with only Zambian government funding.

6. Lessons Learned and Recommendations

(1) Lessons Learned

In order to implement national park management, cooperation with the tourism industry and area residents is essential. In future projects that formulate similar plans, in order to enact effective park management in cooperation with these groups, it is necessary to make every attempt to involve them in the projects from the planning stages.

(2) Recommendations

Because of the Zambian government's financial situation, it will be extremely difficult for the government alone to enact the draft National Park Development Plan formulated by this project. In order to move forward with the implementation of the plan, it is essential that not only Japan but other donor countries, NGOs, the tourism industry, and residents of the area concentrate their efforts together.



Experts Narita (vegetation ecology) and Nitta (wildlife management) conduct a survey on vegetation ecology together with counterparts

Zambia

The Project for Improvement of the Department of Pediatrics and Child Health of University Teaching Hospital

Project Sites

Lusaka



1. Background of Project

In Lusaka, the capital of Zambia, where women and children accounted for more than 70% of the population, the strengthening of mother-child health care services centered on Primary Health Care (PHC) was considered to be the most important mission. Twenty-three urban health centers (UHC) conducted basic health activities for the citizens of this city. However, due to the insufficient consultation techniques of people involved in medical services, there seemed to be a tendency among the citizens to go to the University Teaching Hospital (UTH), the top medical care facility instead. As a result, the UTH not only became over-crowded and outdated but also failed to function as the top medical care facility.

Under these circumstances, the Government of Zambia requested Japan to implement grant aid to ensure the intensification of the UTH functions.

2. Project Overview

(1) Period of Cooperation

FY1995

(2) Type of Cooperation

Grant aid

(3) Partner Country's Implementing Organization

The Ministry of Health, University Teaching Hospital (UTH)

(4) Narrative Summary

1) Overall Goal

The health medical system of Lusaka is improved.

2) Project Purpose

The UTH functions are intensified.

3) Outputs

- An outpatient ward (Outreach Center) in the pediatrics division at the UTH.
- An isolation ward at the UTH is constructed.
- Medical equipment at the UTH is provided.

4) Inputs

Japanese Side

Grant	804 million yen (E/N amount)
-------	---------------------------------

Zambian Side

Local cost

3. Members of Evaluation Team

Management Situation Evaluation:

Mr. Masakatsu KOMORI, Follow-up Division, Grant Aid Management Department, JICA

Procurement Situation Evaluation:

Ms. Reiko HAYASHI, Japan International Cooperation System

4. Period of Evaluation

18 January 1999-22 January 1999

5. Results of Evaluation

(1) Efficiency

The construction of an outpatient ward in the pediatrics division and an isolation ward, and the preparation of medical apparatuses were completed as planned. These facilities were then handed over to the Zambian side.

(2) Effectiveness

Functions of the UTH were intensified with the preparation of medical apparatuses and the construction of a new outpatient ward in the pediatrics division, which formerly had been suffering inadequate facilities and state of overpopulation, and an isolation ward which had been deteriorating rapidly.

With the use of hospital rooms for the seriously injured and emergency rooms within the outpatient ward, it became possible to carry out more advanced treatments in the pediatrics division.

On the other hand, the activities (the technology instructions and training geared towards the UHC medical staff) held at the Outreach Center that was established within the

outpatient ward were not very dynamic. Consequently, it is imperative that immediate structuring be arranged, such as budget adjustment and the clarification of the subjects and persons in charge of the activities.

(3) Impact

With the reinforcement of the referral system (that involves the transferring of patients to the appropriate medical institution according to the degree of their injuries, as well as the notification of the medical institution closest to the patient's residence at the time of his hospital leave regarding information pertaining to his peculiarities) by the Government of Zambia, 90% of its pediatrics patients became those introduced by the UHC. As a result, the number of patients-in-waiting at the pediatrics division decreased, and the congestion at the inpatient's ward was partially alleviated.

In November 1998 at the Outreach Center, a training program geared toward UHC doctors was implemented three times by the PHC Projects experts of JICA.

(4) Relevance

Zambia's medical reform revolves around the PHC and the comprehensiveness of the referral system, and this project was appropriate as a policy toward the reform.

From the point of view of the cooperation contents, an appropriate decision was made to select only a small number of high-level medical equipment to reduce the burden of maintenance costs after the cooperation concludes. Construction of the new isolation ward may have seemed necessary as a means to counter its deterioration, considering the unreasonable congestion at the general and malnutrition wards. However, if observed in terms of priority, the appropriateness of this decision is open to debate.

(5) Sustainability

The UTH hope to improve management of the constructed institution, and their maintenance of the medical apparatuses is by and large satisfactory. However, due to the continuing medical reform at the UTH, it is becoming increasingly difficult to utilize the budget for reasons other than personnel expenses. In addition, due to their high repair rates, the UTH is unable to make use of agencies in Zambia with high-skilled techniques. Moreover, maintenance of the facilities and medical apparatuses in the future is a problematic issue.

6. Lessons Learned and Recommendations

(1) Lessons Learned

Even if subsistence of these local agencies is to be confirmed during the project planning stage in grant aid, there are cases, like this project, in which existing agencies cannot be utilized due to costly charges. During circumstances in which the person in charge on the partner-country side possesses the abilities to specify repair parts and supply spare parts, Japan is to demand the active employment of the "Technical Information Center" that has been set up by the Japan International Cooperation System in order to promote the maintenance of the equipment.



Counterparts examining patients on a pediatric ward

The Project of Construction of Primary Schools

Project Sites

Yamoussoukro, Dimbokro, Agboville, Adzope, Abidjan (Abobo Area)



1. Background of Project

Côte d'Ivoire aimed to raise its gross enrollment rate of elementary education to 90% by the year 2000, and to enroll all children of six years old in school. However, due to insufficient funds, there had been a delay in the construction of school facilities which resulted in a shortage of classrooms. There were cases where the government substituted rented warehouses for classrooms or the parents of the pupils leased them voluntarily. This situation led to a poor learning environment and a heavy financial burden on the parents, which contributed to the fact that no increase in the enrollment rate had been attained.

Given such circumstances, the African Development Bank (AfDB) constructed 167 new primary schools and renovated 375 schools. The Government of Côte d'Ivoire made a request to Japan for grant aid in order to transfer and rebuild the rented schools that were not included in the AfDB project.

2. Project Overview

(1) Period of Cooperation

FY1995-FY1997

(2) Type of Cooperation

Grant aid

(3) Partner Country's Implementing Organization

Project Implementation Office (PIO) of the Ministry of National Education and Basic Training

(4) Narrative Summary

1) Overall Goal

To raise the enrollment rate of elementary education.

2) Project Purpose

To improve the learning environment in elementary education.

3) Outputs

- a) To construct 72 primary schools (390 classrooms).
- b) To provide educational equipment (desks, chairs, blackboards, etc.).
- c) To provide educational tools (protractors, rulers, compasses, maps, etc.).

4) Inputs

Japanese Side

Grant	3.124 billion yen (E/N amount)
-------	-----------------------------------

Cote d'Ivoire Side

Land acquisition, site preparation, construction of outer walls
Securing of electricity and water supplies
Local cost

3. Members of Evaluation Team

JICA Côte d'Ivoire Office

(Commissioned to Ms. Savina Ammassari and Mr. Diane Sory)

4. Period of Evaluation

15 February 1999-17 March 1999

5. Results of Evaluation

(1) Efficiency

PIO's procedural delays and problems with budget implementation led to overall delays in the work undertaken by the Côte d'Ivoire side, such as land acquisition, site preparation and the securing of electricity and water supplies. In some locations, construction work was temporarily halted due to Côte d'Ivoire Government's lack of coordination with cities acting as real estate brokers prior to the initiation of the project. While the project was eventually completed within the allotted timeframe for construction, the delays in the work undertaken by the Côte d'Ivoire side made an impact upon the facilitation of the project.

With the exception of roofing materials, the resources and materials utilized in the project were all procured locally. Despite the high unit cost of the roofing materials, which were French-manufactured, priority was given to their durability, heat resistance and soundproofing effect.

(2) Effectiveness

The new school buildings are durable with enhanced

facilities, widely improving the elementary education environment in the target regions. All 17 schools (111 classrooms) constructed in FY1995 are being used, while of the 22 schools (138 classrooms) constructed in FY1996, those where installation work for electricity and water supplies has been completed by the Côte d'Ivoire side have begun to be used. Since the 32 schools (153 classrooms) constructed in FY1997 have only just been handed over in March 1999, it is hoped that they will begin to be used immediately¹⁾.

(3) Impact

The attractiveness of the new school buildings compared with other schools, as well as their enhanced facilities, have resulted in a positive change in the attitude of children and teachers, as seen, for example, in a greater will for education and the observance of lesson times. Parents' interest toward school education has also heightened. Furthermore, children from households unable to afford rental charges up until now are expected to be able to attend school in future.

The schools that have begun to be used have witnessed higher attendance rates and pupil increases compared with the time prior to the renovation of buildings. It is envisaged that there will be an even higher impact on the regions once all the constructed primary schools are in use.

(4) Relevance

The project itself was highly relevant, given that it was based on the Program of Structural Adjustment of Human Resources formulated by the Government of the Côte d'Ivoire in 1991. However, since the project did not reflect the later population dynamic, in some regions the number of constructed classrooms was inconsistent with the number of pupils.

(5) Sustainability

In Côte d'Ivoire the central government administers the education budget. Due to the lack of progress made in decentralization, however, the expenditure necessary for the maintenance of facilities was always covered through donations from individual households to schools. At a later stage, this traditional system of donations was prohibited by ordinance under the policy of the central government to move forward earnestly with the decentralization of the budget. However, with no change in the budget allocation situation from the central government, at present each school has insufficient budget for the maintenance of its facilities.

Furthermore, since the project did not involve the participation of teachers, local residents and other beneficiaries during the planning and implementation stages, the local residents are of the strong mindset that the constructed schools are not "our schools" but "schools that came from Japan." As such, they lack the awareness to undertake maintenance by themselves.

6. Lessons Learned and Recommendations

(1) Lessons Learned

In order to ensure suitable maintenance of school buildings and facilitate school management in the post-construction period, it is desirable to conduct activities to promote the

participation of local residents from the planning stage onwards.

Analysis and examination of appropriate costs should be conducted by comparing unit cost and the effect regarding the construction of schools. Given the view that a shift to reduced amounts of maintenance expenditure and labor supply to areas such as improvement of educational materials and the securing of high quality teachers would contribute to the development of elementary education in Côte d'Ivoire, there is a need to discuss the appropriate construction costs considering not only work expenditure, but also objectives and a reduction in maintenance by specifying the number of years the new building(s) will be durable.

A large number of African countries, including Côte d'Ivoire, do not have sufficient statistical data on pupil numbers, teacher numbers and other figures. As such, the production of basic "school mapping" should be considered in the regions targeted for cooperation when constructing primary schools in such countries, in order, for example, to more appropriately determine the relevance of the target region and the scale of buildings, and investigate on a quantitative basis the impact such as enrollment rates. The production of school mapping alone on the basis of existing schools and numbers of school year pupils will enable JICA overseas offices to respond by undertaking On-Site Surveys using local consultants, or by dispatching individual experts.

¹⁾ As of May 2000, all schools are being used.