

STUDY REPORT
ON
THE GRANT AID FOR CHILD WELFARE
THE PROJECT FOR THE REINFORCEMENT OF
CHILDREN'S AND WOMEN'S HEALTH
IN
THE REPUBLIC OF DJIBOUTI

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1173179(1)

March 2001

Japan International Cooperation Agency

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01-141

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PREFACE

In response to a request from the Government of the Republic of Djibouti, the Government of Japan decided to conduct a study on the Grant Aid for Child Welfare, the Project for the Reinforcement of Children's and Women's Health and entrusted the Japan International Cooperation Agency (JICA) to conduct the study with the assistance of the Japan International Cooperation System (JICS).

JICA sent to Djibouti a study team from September 11 to October 13, 2000.

I hope that this report will contribute to the promotion of the project and to the enhancement of friendly relations between our two countries.

I wish to express my sincere appreciation to the officials concerned of the Government of the Republic of Djibouti for their close cooperation extended to the team.

March 2001

Kunihiko Saito

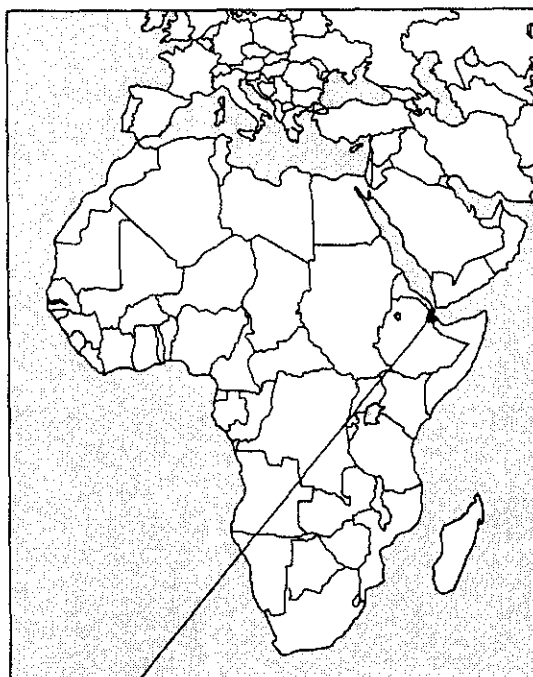
President

Japan International Cooperation Agency

Location map

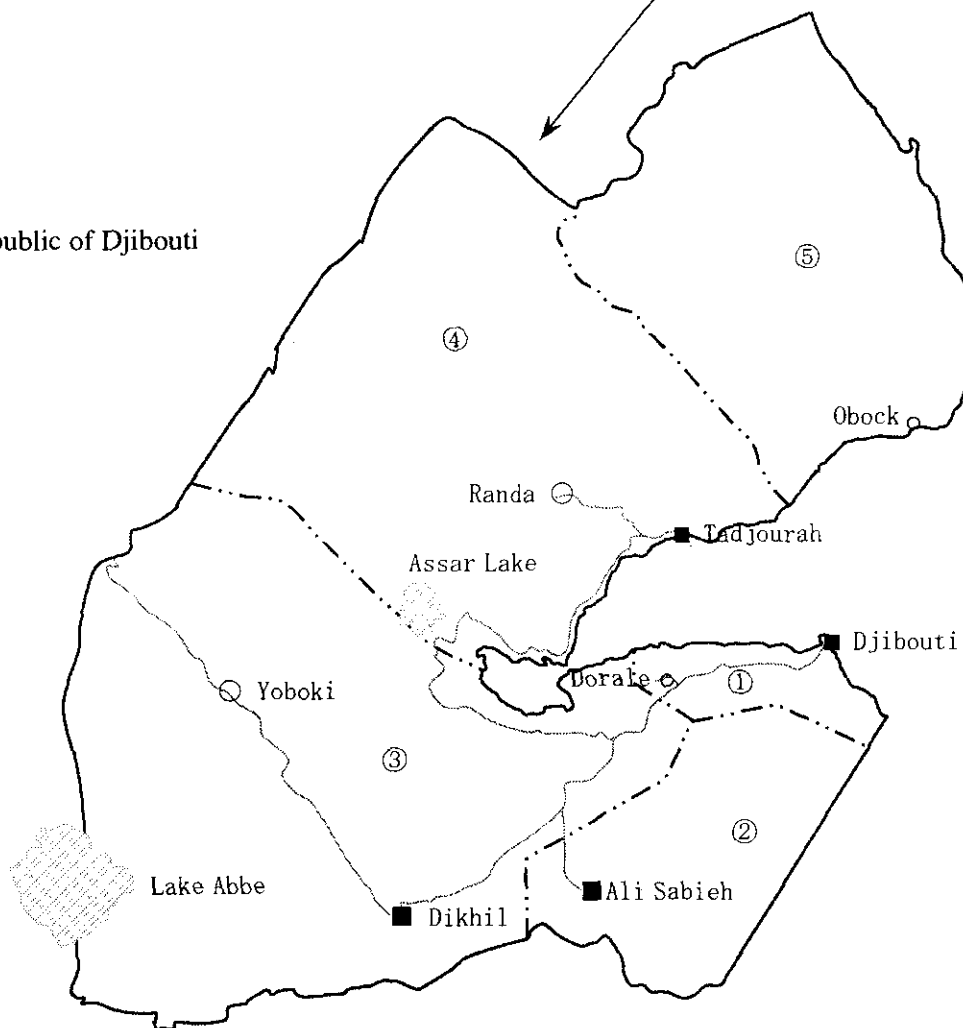
The targets in the Project are National Hospitals, Dispensaries, Family Planning Centers in the whole country.

- ① Djibouti City
- ② Ali Sabieh District
- ③ Dikhil District
- ④ Tadjourah District
- ⑤ Obock District



African region

The Republic of Djibouti



Abbreviations

Abbreviated word	Full-name
AFP	Acute Flaccid Paralysis
AMDA	Association of Medical Doctors of Asia
ARI	Acute Respiratory Infection
BCG	Bacillus Calmett Guerin
DPT	Diphtheria-Pertussis-Tetanus Combined Toxioid
E/N	Exchange of Notes
EPI	Expanded Programme on Immunization
NID	National Immunization Day
OPV	Oral Polio Vaccine
PHC	Primary Health Care
TT	Tetanus Toxioid
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
WHO	World Health Organization

Chapter 1 Background of the Project

The situation of maternal and child health in the Republic of Djibouti (hereinafter referred to as "Djibouti") is extremely poor. Ensuring the health of children under 5 years old (numbering approximately 70,000), accounting for about 10% of the entire population of approximately 690,000, and of expectant and nursing mothers (approximately 30,000), accounting for approximately 4.5% of the entire population, is considered an important issue (Tables 1 and 2).

Table 1 Shifts in child health indicators

Child health indicator \ Year	1985	1990	1997
Infant mortality rate ¹	152	119	111
Under-5 mortality rate ²	257	167	156

Source: The State of the World's Children, 1999

Table 2 Comparison of maternal and child health indicators

Indicator \ Nearby countries	Under-5 mortality rank	Children			Mothers	
		Under-5 mortality rate ²	Infant mortality ¹	Underweight ³ (%)	Total fertility rate ⁴	Maternal mortality ⁵
		1997	1997	1997	1997	1980-97
Somalia	9	211	125	-	7.0	-
Ethiopia	18	175	111	64	7.0	-
Djibouti	26	156	111	26	5.4	-
Eritrea	40	116	73	38	5.4	1000
Sudan	41	115	73	-	4.6	550
Yemen	49	100	76	39	7.6	-
Kenya	55	87	57	34	4.9	370
Egypt	65	73	54	25	3.4	170
Developing countries	-	96	65	38	3.1	-

Source: The State of the World's Children 1999

The government of Djibouti has therefore made the improvement of maternal and child health a priority and has implemented important programs in the areas of immunization, measures against diarrheal diseases and acute respiratory infectious diseases, and promotion of infant nutrition, as well as maternal care and family planning for mothers.

Most mortality and morbidity among neonates and infants are caused by diseases that can be prevented by the improvement of primary health care, such as diarrheal disease, infectious

¹ Probability of infants dying between birth and their first birthday expressed per 1,000 live births

² Probability of children dying between birth and their fifth birthday expressed per 1,000 live births

³ Indicator showing malnutrition of children under age 5 expressed as the ratio of children having below minus 2 standard deviation from the median height for the age of the reference population (%)

⁴ Average number of children born during a woman's lifetime

⁵ Annual number of deaths of women from pregnancy-related causes expressed per 100,000 deliveries

diseases, and malnutrition. Most mortality and morbidity among mothers are caused by diseases the risk of which can be reduced by proper management of pregnancy, such as gestosis, threatened miscarriage, hysteroorrhaxis, puerperal infection caused by delivery under unhygienic conditions, and sepsis caused by complications from illegal abortion.

However, economic crises, the inflow of foreigners including refugees, shortage of staff, lack of a medical referral system, and lack of obstetric equipment have obstructed the above-mentioned health activities, preventing the achievement of conspicuous results.

For the purpose of improving the above-mentioned situation, the government of Djibouti formulated "the Project for the Reinforcement of Children's and Women's Health" and requested the Japanese government for grant aid to procure immunization equipment including vaccines and cold chain equipment, obstetric equipment, and malaria control equipment.

The present situation and problems relating to immunization, maternal and child health, and malaria control are as follows.

(1) Immunization

As in the neighboring African countries of Ethiopia, Somalia, and Eritrea, immunization coverage in Djibouti has remained low since 1994 due to the civil war which began in 1992 (Table 3). In the Health Development Plan (1996 - 2000), the government of Djibouti took as its immediate target increasing the immunization coverage of BCG, OPV, measles, and DPT (diphtheria, pertussis, and tetanus toxoid) to 80% and that of neonatal tetanus vaccine for Pregnant women to 70%.

Table 3 Immunization coverage in Djibouti

Year	1994	1995	1996	1997
BCG	58%	76%	58%	67%
OPV	57%	63%	49%	62%
DPT	57%	63%	49%	62%
Measles	59%	58%	47%	59%
Neonatal tetanus	23%	37%	47%	45%

Source: WHO immunization coverage by country (1999)

The causes of the lack of progress in immunization activities include the destruction of facilities and equipment by the civil war, lack of funds caused by the stagnant economy, the rapid increase in population due to the inflow of refugees, and the despondency of staff due to the delay in payment of salaries.

Breakdown and lack of maintenance of cold chain equipment due to the lack of a maintenance system and lack of budget have also aided the stagnation of immunization activities. However, with the support of WHO and the United Nations Children's Fund (UNICEF), the cold chain equipment is expected to be improved throughout the country in 2001.

Until now, the government of Djibouti has been totally dependent on UNICEF for the procurement of vaccines, and this situation is expected to continue for the foreseeable future.

(2) Maternal and child health

The Ministry of Health in Djibouti has implemented the "Safe Delivery Project" with the support of the United Nations Population Fund (UNFPA) with the aim of reducing deaths among pregnant women. It has also endeavored to spread birth control by promoting an appropriate age for first delivery, a proper interval between deliveries, and an appropriate number of deliveries (family planning), as well as improving ante-natal and post-natal examinations and obstetric emergency medical services. Furthermore, in order to increase the delivery rate at facilities⁶, the Ministry of Health has implemented education and popularization activities in villages. On the other hand, although there are no accurate data showing the shifts in maternal mortality in Djibouti, the Ministry of Health reported that maternal mortality was 784 out of 100,000 deliveries (estimate for 1997). And a study report by UNFPA confirmed that there was no sign of improvement in maternal mortality.

Taking into consideration the situation described above, the government of Djibouti formulated the Reproductive Health Project with the intention of expanding family planning and ante-natal and post-natal examinations, as well as improving maternal health through the expansion of obstetric emergency medical services. The activities of the Reproductive Health Project include health education for women of child-bearing age and the improvement of Family Planning Centers which act as bases for training midwives. The government intends to charge the Belgian University with the task of providing technical support in the form of regular dispatch of experts when implementing the Reproductive Health Project.

(3) Malaria control

Measures to combat malaria have been urgently needed since the beginning of the 1990s as malaria is one of the main diseases in Djibouti.

The reports of WHO studies implemented in 1993 and 1994 indicate that, of clinical examinations, the ratio of malaria cases confirmed and diagnosed by microscope was 21.1% (5,353 cases) in the 1993 data and 24% (6,140 cases) in the 1994 data.

⁶ In Djibouti, the ratio of home deliveries is 44%. (Source: UNFPA, 1997)

It has been confirmed that two types of malaria exist in Djibouti, plasmodium falciparum and plasmodium ovale, of which falciparum malaria which causes severe symptoms is overwhelmingly more common. In the study reports mentioned above, plasmodium falciparum accounted for more than 97% of malaria cases.

Although no full-scale epidemiological study covering the entire country has been conducted in recent years, more than 4,000 cases of malaria are confirmed every year. Some reports indicate that the areas where malaria is prevalent are expanding with the movement of refugees.

The Ministry of Health in Djibouti formulated the "National Malaria Control Program (1999 – 2000)" with the support of WHO, but it has been not implemented because of lack of coordination at the implementation stage. The following measures are proposed in the National Program, but implementation of the measures under the leadership of the government of Djibouti is difficult because of the lack of operating funds, lack of personnel to implement the measures, and lack of epidemiological study techniques.

- (i) To administer chloroquine, the first choice drug, to suspected malaria cases judged from the clinical symptoms (clinical malaria) without waiting for laboratory test results (confirmed malaria)
- (ii) To implement indoor residual spraying or outdoor spraying of insecticide to eradicate vector (vector control)
- (iii) To eradicate mosquito larvae by spraying insecticide where mosquito larvae are generated or by stocking cultured small fish
- (iv) To centralize information on malaria control and conduct personnel training

Chapter 2 Contents of the Project

2-1 Basic Concept of the Project

The target areas, facilities, contents, and types of equipment to be procured by the Project are as follows.

(1) Vaccines and syringes

- **Vaccines**

On the basis of the past achievements of immunization activities implemented by the Ministry of Health in Djibouti with the support of UNICEF and WHO, the Project shall procure the basic vaccines (OPV, BCG, measles, DPT) required for routine immunization in 2001, and tetanus vaccine for pregnant women with the aim of preventing neonatal tetanus.

Djibouti has no experience of administering the hepatitis B vaccine in the past, and it is judged difficult for Djibouti to undertake the self-efforts to purchase hepatitis B vaccine after the completion of the Project. Therefore, hepatitis B vaccine shall not be included in the Project.

- **Syringes and safety boxes**

The syringes used for immunization shall be of the auto-disable type which is already used in Djibouti and is recommended by WHO for the prevention of secondary infection by HIV.

Safety boxes are not included in the original request, but the necessary quantity shall be procured for the purpose of promoting the proper disposal of used syringes.

(2) Equipment for the Reproductive Health Project

The purpose of the Reproductive Health Project is to improve the medical service related to maternal and child health through the supply of equipment.

The government of Djibouti has implemented the "Family Planning Project" and "Safe Delivery Project" which are important in maternal and child health policy in Djibouti with the full support of UNFPA. These activities have achieved certain results. However, to ensure more sweeping coverage, the government of Djibouti combined the two projects and formulated the Reproductive Health Project. The Reproductive Health Project was formally signed by the government of Djibouti, UNFPA and other related parties in October 2000, and it was decided to start the Project in January 2001 for two years (2001 - 2002).

The equipment required should upgrade the five Family Planning Centers that will serve as training and educational bases for the Reproductive Health Project.

Equipment previously supplied through UNFPA has been properly used and maintained, and the equipment to be supplied through this Project is expected to be handled in the same manner.

(3) Medical equipment for mothers and children

1) Equipment for tertiary medical facilities

Of the medical facilities targeted by the Project, the General Peltier Hospital, Dar El Hanan Hospital, Balbala Hospital, and Paul Faure Anti-tuberculosis Hospital occupy the position of tertiary medical facilities. The French Cooperation supports the General Peltier Hospital and Paul Faure Anti-tuberculosis Hospital, the Association of Medical Doctors of Asia (AMDA) supports Dar El Hanan Hospital, and an international nongovernmental organization (NGO) based in Italy supports Balbala Hospital mainly by technical cooperation through the dispatch of specialists. Implementation of grant aid cooperation to procure the necessary equipment for medical facilities that receive technical support from other countries and NGOs will have a synergic effect on improving the obstetric and pediatric services in these facilities. The facilities can then expect to benefit from the strengthening of the maternal and child health system and life-saving ratio of mothers and children in Djibouti.

2) Equipment for district hospitals

The country of Djibouti consists of the Djibouti city and four administrative districts. Each district has one district hospital as a secondary medical facility.

One of the causes of the high mortality rate in Djibouti is the low diagnostic ability of the district hospitals and peripheral medical facilities (health centers) and their inability to refer patients appropriately (selection and transfer of patients who really need emergency treatment).

The supply of basic equipment such as diagnostic ultrasound systems and Doppler fetal heart detectors to district hospitals is expected to reduce labor in both the district hospitals (the sender) and the General Peltier Hospital (the receiver) caused by the unnecessary transfer of patients, and contribute to the establishment of an efficient referral system.

(4) Equipment for malaria control

The request from Djibouti regarding malaria control includes outdoor insecticide sprayers, equipment for eradicating mosquito larvae, and vehicles for conducting activities (Table 4). However, there is no experience in use of the equipment for malaria control in the past. As the government of Djibouti has not conducted a basic survey, determination of the high risk areas where malaria infection is prevalent, the number of residents and houses in the high risk areas, and the number of confirmed cases of malaria in each area are not clear. It is difficult, therefore, to verify the appropriateness of the equipment. In addition, there are no specialists in vector control, including mosquito larvae control, to use the requested equipment.

For these reasons, supply of the required equipment is determined to be inappropriate and shall not be included in the Project.

Table 4 Equipment requested for malaria control

No.	Name of requested equipment	Quantity	Use/Remarks
Vector control equipment			
1	Outdoor insecticide sprayer (for mounting on vehicle, with diesel engine)	1	For outdoor spraying of insecticide. WHO is cautious about the use of sprayers from the standpoint of environmental contamination.
2	Small fish to eradicate mosquito larvae	-	Experimentally used in some African countries where malaria control is more advanced. Procurement is difficult.
3	Cold box	10	To transport the above-mentioned small fish.
4	Cart for outdoor sprayer	2	
5	Insecticide sprayer	10	For indoor residual spraying. WHO specifications.
6	Drainage pump	2	To drain the water pool generated during the rainy season. For eradication of mosquito larvae.
Vehicles for activities			
7	Pick-up truck	1	Double-cabin
8	Pick-up truck	1	Single-cabin
9	Truck	1	For transporting equipment
10	Mini-bus, motorcycle, etc.	-	

2-2 Basic Design

2-2-1 Design Policy

In formulating this grant aid project, the contents and necessary quantities have been determined as follows.

(1) Vaccines and syringes

- 1) The amount of vaccine required for the year 2001 shall be procured. The target immunization coverage shall be 80% for BCG, OPV, DPT and measles, and 70% for tetanus, as stated in the Health Development Plan.
- 2) The target immunization coverage for children under 5 who were not included in the immunization schedule shall be 10% of the target population, based on the present implementation rate. However, the above shall not be taken into consideration in the case of OPV because the subjects will have been immunized through implementation of the National Immunization Day's (NID's).
- 3) The number of immunizations shall be once for BCG, three times for DPT, four times for OPV, once for measles, and twice for neonatal tetanus for pregnant women. These numbers have been adopted by the government of Djibouti based on the immunization schedule recommended by WHO.
- 4) The Ministry of Health in Djibouti has no statistics on vaccine wastage in normal immunization activities. According to nurses in charge of immunization at health centers, it varies from 50% to more than 80% depending on the population in the target area and the efficiency of immunization activities. In the Project, vaccine wastage is uniformly assumed to be 40%, which is the rate used by the local UNICEF office to estimate the required amount of vaccine.
- 5) In estimating the required amount of vaccine for the Project, the estimated target population listed in the "Evaluation Report of the National Poliomyelitis Administration Plan (1999)" formulated by the Ministry of Health in Djibouti in cooperation with WHO and UNICEF is used (Table 5).

Table 5 Estimation of target population (2001)

Target population	Number of persons
Total population	698,702
Infants under 1 year old	27,599
Children between 1 and 5 years old	73,154
Pregnant women	31,449

- 6) Auto-disable syringes recommended by WHO for the prevention of secondary infection by HIV and regularly used in Djibouti shall be procured for immunizations other than

BCG and OPV. Safety boxes are not included in the original request, but the necessary quantity shall be procured to promote the proper disposal of syringes.

The necessary quantities of vaccines and syringes are shown in Table 6.

Table 6 Vaccines and syringes to be procured

No	Equipment name	No. of immunizations	Planned quantity	Basis for estimating quantity
1	BCG vaccine	One	3,000 vials	Estimated by multiplying the total target population of 27,599 (infants under 1 year old) by the target immunization coverage of 80%, the number of immunizations, and vaccine wastage of 40%. A further 10% is included for non-immunized children (under 5 years old).
2	Measles vaccine	One	4,900 vials	Estimated by multiplying the total target population of 27,599 (infants under 1 year old) by the target immunization coverage of 80%, the number of immunizations, and vaccine wastage of 40%. A further 10% is included for non-immunized children (under 5 years old).
3	DPT vaccine	Three	14,700 vials	Estimated by multiplying the total target population of 27,599 (infants under 1 year old) by the target immunization coverage of 80%, the number of immunizations, and vaccine wastage of 40%. A further 10% is included for non-immunized children (under 5 years old).
4	Oral poliomyelitis vaccine	Four	14,700 vials	Estimated by multiplying the total target population of 27,599 (infants under 1 year old) by the target immunization coverage of 80%, the number of immunizations, and vaccine wastage of 40%. No amount for non-immunized children is included.
5	Tetanus vaccine	Two	7,300 vials	Estimated by multiplying the total target population of 31,449 (expectant and nursing mothers) by the target immunization coverage of 70%, the number of immunizations, and vaccine wastage of 40%.
6	Disposable syringes for immunization by BCG vaccine	—	290 boxes/100 syringes	For immunization by BCG vaccine. Estimated by multiplying the total target population (infants under 1 year old and 10% of children under 5) by the target immunization coverage of 80%, and the number of immunizations (one). Vaccine wastage is not taken into consideration.
7	Auto-disable syringes (0.5 ml)	—	1,620 boxes/100 syringes	For immunization by measles, DPT and tetanus vaccines. Estimated by multiplying the target population (infants under 1 year old and 10% of children under 5) by the target coverage for each vaccine and the number of immunizations. Vaccine wastage is not taken into consideration.
8	Safety boxes	—	1,910 boxes	To collect the above-mentioned two types of syringe. One box can hold 100 syringes.

(2) Equipment for Reproductive Health Project

The Reproductive Health Project involves a diverse range of activities including health

education and birth control instruction for childbearing age women, distribution of contraceptive drugs and devices, expansion of ante-natal and post-natal examinations, retraining of midwives, and STD and HIV control. The objective of this Project is to build a comprehensive reproductive health system.

The required equipment shall be distributed to the five Family Planning Centers to be upgraded in the future. In addition to the existing Family Planning Section in the hospitals and health centers, the Family Planning Centers shall take on training functions and become bases for ante-natal and post-natal examinations, educational activities for midwives and residents, and administrative work related to statistics, monitoring, and evaluation activities, as well as family planning and additional immunization of tetanus vaccine to childbearing age women.

Taking into consideration the necessity, appropriateness, ability of the recipient country to use the equipment, and the state of existing equipment confirmed by the field survey, the equipment shall be procured in the following quantities (Table 7).

Table 7 Details of equipment and planned quantities

Equipment	Requested quantity	Planned quantity	Remarks
1. Computer printer	1	—	No necessity is recognized.
2. Examination table, chair, cabinet, etc.	5 sets	—	Procurement from UNFPA headquarters is less expensive. Not all items are necessary.
3. Midwifery kit	10	10	To be distributed to the Family Planning Centers where deliveries are performed in Djibouti city and other areas
4. Obstetric manikin set for training midwives	1	1	To be allocated to the training center for health staff attached to General Peltier Hospital
5. Diagnostic ultrasound system, hysteroscope, laparoscope	1 to 3 sets	—	Allocation of equipment to each medical facility as equipment for mothers and children is being looked into.
6. Large-size TV and video recorder	3 sets	3 sets	To be distributed to Einguela, Balbala, and Farah Had Family Planning Centers
7. Pick-up truck, 4WD	2	1	To be allocated to the Social Medical Center of the Ministry of Health
8. Refrigerator (standard type)	5	5	To be distributed to Ali Sabieh, Balbala, Martial, Dorare, and Farah Had Family Planning Centers.
9. Air-conditioner	5	5	Same as above.
10. Copy machine	2	2	To be allocated to the training center for health staff attached to General Peltier Hospital and the Social Medical Center of the Ministry of Health

(3) Medical equipment for mothers and children

The Project shall procure medical equipment that will contribute to the improvement of maternal and child health at eight medical facilities throughout Djibouti. The basic policy underlying selection of the equipment is described below.

- 1) The equipment shall be basic, essential equipment for the reinforcement of maternal and child health in Djibouti.
- 2) Equipment not originally requested but duly recognized as necessary shall be included.
- 3) The level of medical service at each target facility shall be checked to ensure that the equipment is appropriate to the functions of the facilities and can be used by the present medical employees.
- 4) Taking into consideration the state of use of existing equipment at each target facility, priority shall be given to replacing old equipment and making up equipment shortages. If any equipment supplied through grant aid cooperation by Japan in the past has broken down, the cause of failure shall be ascertained and measures to remedy the failure included in the Project.
- 5) The equipment shall be easy to maintain.
- 6) It shall be financially possible to maintain the equipment, including purchase of consumables and spare parts.

The policy underlying selection of the equipment for each target facility is shown in Table 8.

Table 8 Selection policy of equipment for each target facility

General Peltier Hospital	① Considering that this is the top referral hospital of Djibouti and it accepts emergency patients referred from lower-level medical facilities, and that French specialists (a total of 16 specialists at present, including two obstetric and gynecology doctors) are continuously engaged in technical training, equipment requiring special skills, such as delivery monitors and hysteroscopes, shall be procured.
	② Considering the state of use of the equipment supplied through two grant aid projects by Japan in the past, equipment that is not used often shall not be included in the Project.
	③ The existing faulty general radiographic system and outdated automatic film processor were supplied through a past grant aid project by Japan, but one of the causes of failure and problems is damage to the foundations and broken wires caused by small animals (rats, cockroaches, etc.). The installation work shall include measures against small animals, and consideration shall be given to maintenance of the above-mentioned equipment to be procured as a replacement.
Dar El Hanan Hospital	① The hospital has requested grant aid for a grassroots project from the Japanese government. Coordination is necessary to avoid duplication when the grant aid for the grassroots project is implemented.

Dar El Hanan Hospital	<p>② Dar El Hanan Hospital was the first hospital to introduce the system of beneficiaries (patients) paying for medical services (introduction of hospital self-support system). Since introducing the system, the collection rate of medical expenses has been 100%. Part of the income has already been appropriated for vehicle fuel, purchasing of office supplies, and repair of equipment.</p> <p>Regarding the equipment plan, the aim of the hospital to supply medical services appropriate to the above-mentioned introduction of a paying system is taken into consideration, in addition to technical cooperation by AMDA. Therefore, a diagnostic ultrasound system that can be expected to produce income from examinations shall be included in the Project, and a duplicating machine that will incur maintenance costs shall be procured.</p>
Balbala Hospital	<p>① COOPI (an international NGO with its headquarters in Italy) has supported this hospital and four health centers in the Balbala area (generally called Balbala Centers) in both the technical and operational/budgetary aspects since 1988. COOPI declares that it will take proper measures for the procurement and total maintenance of consumables for the equipment supplied through the Project. Considering the above-mentioned situation, anesthesia apparatus that especially needs maintenance shall be included in the Project.</p>
Health centers in Djibouti city and local district hospitals	<p>① Of the four districts, Dikhil District Hospital shall be excluded from the Project because the doctors are dispatched from the French Ministry of Cooperation for Development for the purpose of technical cooperation, and the hospital has sufficient equipment. Therefore, the target facilities shall be the three district hospitals of Obock, Tadjourah, and Ali Sabieh as well as Hayableh Health Center which has an obstetric function.</p> <p>② There is one doctor working in each facility. Considering the level of their medical skills, financial situation and maintenance ability, equipment that needs skill in handling or that needs a lot of consumables shall not be included in the Project.</p>
Paul Faure Anti-tuberculosis Hospital	<p>① This hospital has a general radiographic system supplied through past Japanese grant aid cooperation. However, since it was installed, this equipment has had frequent problems due to the power situation and it needed repair each time. At present the power situation in Djibouti city has improved due to the support of overseas countries. Therefore, a general radiographic system and related equipment such as a manual X-ray film processor shall be procured by the Project. As with the General Peltier Hospital, measures against small animals shall be implemented by the Japanese side.</p>

3. Medical equipment for mothers and children

Equipment	Target facility								Quantity
	General Peltier Hospital	Dar El Hanan Hospital	Balbala Hospital	Paul Faure Anti-tuberculosis Hospital	Hayableh Health Center	Central Medical Hospital of Obock	Central Medical Hospital of Tadjourah	Central Medical Hospital of Ali Sabieh	
1) Free-standing screen for examination	4			1	1	1			7
2) Examination light	4			1	1	1	1	1	9
3) Examination cabinet	4			1	1	2		1	9
4) Jaundice meter (for percutaneous measurement)	2								2
5) Laryngoscope set (for neonates)	4	1	1		1	1	1		9
6) Portable incubator	1		1		1	1	1		5
7) Neonatal scales	1					1			2
8) Manual resuscitation bag (for children)	3	1	1		1	1	1	1	9
9) Phototherapy unit	2								2
10) Neonatal resuscitation set (with stand)	2		1						3
11) Obstetric instrument set	1								1
12) Manual resuscitation bag (for adults)	3	1		1	1	1	1	1	9
13) Standard scales	1			1		1	1		4
14) Delivery table	6		1		1			1	9
15) Vacuum extractor	2	1	1		1	1	1	1	8
16) Doppler fetal heart detector	3	2			1	1		1	8
17) Diagnostic ultrasound system (portable)	1	1				1			3
18) Diagnostic ultrasound system (standard)	1								1
19) Oxygen concentrator	3		1			1	1		6
20) Thermocoagulator for cervical lesion	1								1
21) Delivery monitor	3								3
22) Hysteroscope	1								1
23) Desk-top steam sterilizer (portable)	1								1
24) General radiographic system	1			1					2
25) Automatic developing machine	1								1
26) Manual X-ray film processor set				1					1
27) Manual X-ray film processor and processing utensils								1	1
28) X-ray protective cloth	1			1					2
29) Air-conditioner	11								11
30) Copy machine	1	1		1					3
31) Ambulance	1	1	1						3
32) Anesthesia apparatus (with ventilator)			1						1

Note: 11 air-conditioners for General Peltier Hospital are to replace the deteriorating and faulty air-conditioners: 2 for the delivery room, one for each of 3 rooms for seriously ill patients, one for each of 6 rooms for which hospital charges can be collected in the obstetric and gynecology and pediatric wards.

2-2-3 Contents and Objectives of the Main Equipment (Basic Design Drawing)

The contents and objectives of the main equipment selected on the basis of the design concept are as follows.

Reproductive Health	Quantity	Description	Objectives/Remarks
1 Pick-up truck	1	4WD, double cabin, left-hand drive, diesel engine, displacement volume of 2,500cc or more, with air-conditioning	The Reproductive Health Project intended to procure one truck each year. The truck will normally be used for mobile instruction and monitoring work. The government of Djibouti requested two trucks, but one is intended for the social medical center of the Ministry of Health. Considering that the truck must run on unpaved roads on the outskirts of Djibouti city, a 4WD truck shall be procured.
General Peltier Hospital	Quantity	Description	Objectives/Remarks
1. Diagnostic ultrasound system	1	Display mode: B, M, B/M modes, with convex and transvaginal probes. Thermal printer, ultrasonic gel, with printer paper	Diagnostic equipment for gynecology department (to check the existence of hysteromyoma and/or ovarian cysts) and obstetrics department (to confirm fetal growth and fetal position). Existing machine is old and outdated, probe is in poor condition, and image is not clear. Will also be used for the training of nursing students in the attached nursing school. Increase of examination income by procurement of new equipment can be expected.
2. Thermocoagulator for cervical lesions	1	Thermocoagulation temperature: 50 - 100°C, automatic temperature control, with one probe and special stand	Therapeutic equipment for uterine sores, early stages of uterus cancer. New equipment that does not need anesthesia for uterine sore treatment and does not involve much invasion for patients. The existing colposcope used in examinations was supplied by Japan in the past. As the existing colposcope is still being used now, both the existing and the new equipment shall be used for diagnosis and treatment.
3. Hysteroscope	1	The equipment consists of a main unit, halogen power source, and standard biopsy probe. Total length: 590 mm, Diameter at the tip: 4.5 mm	To observe the uterus directly and diagnose any anomaly in the cavity of the uterus. New equipment but highly useful and safe. General Peltier Hospital has an ethylene oxide gas sterilizer. Therefore sterilization of this equipment is no problem.
4. General radiographic system	1	The equipment consists of X-ray high-voltage generator, X-ray tube, X-ray tube holder, X-ray table, and film cassette. Maximum current for X-ray tube: 320 mA (simple radiographic system can	To determine the invasion of respiratory infectious diseases (pneumonia, tuberculosis, influenza virus, etc.), the main causes of infant deaths. To replace the machine supplied by past Japanese grant aid that is now faulty. At present, X-rays are taken by the transilluminator, but it cannot handle the increasing

		mainly take X-rays of chest, abdominal region and bones.)	requests for X-ray examinations from various departments. The number of X-rays taken is approximately 35 a day.
5. Automatic processor	film	1	Developing time: approximately 90 seconds, developing temperature: 35°C, tank capacity: 10 liters each for developing, fixing and cleaning solutions. Film tray and development tank are standard equipment.
6. Ambulance		1	4WD station-wagon, with stretcher, red revolving light, sheet for attendant, and siren.
			To transfer patients when requested by lower-level medical facilities. Also to pick up the doctor for emergencies at night. The hospital has only one ambulance at present. Therefore, the pick-up truck also substitutes as an ambulance, or an ambulance is rented from the French Military Hospital. Considering that it will be driven on unpaved roads on the outskirts of Djibouti city, the ambulance shall be a 4WD vehicle.

Dar El Hanan Hospital	Quantity	Description	Objectives/Remarks
1. Diagnostic ultrasound system (portable)	1	Display mode: B, M, B/M modes, with convex and transvaginal probes. With special cart.	To replace one of the two existing systems that has been used for approximately 10 years and is aging (the other was recently donated by the government of Libya). For the gynecology doctor dispatched by AMDA.
2. Ambulance	1	4WD station-wagon, with stretcher, red revolving light, seat for attendant, and siren.	Dar El Hanan Hospital refers or transfers patients other than normal delivery cases to General Peltier Hospital as a general rule. As this hospital has no ambulance at present, it asks General Peltier Hospital to come and pick up severely ill patients.

Balbala Hospital	Quantity	Description	Objectives/Remarks
1. Ambulance	1	4WD station-wagon, with stretcher, red revolving light, seat for attendant, and siren.	To transfer severely ill patients from the health centers to Balbala Hospital or to transfer patients to General Peltier Hospital. The number of cases of use of the ambulance is expected to be more than 10 a day including the regular mobile examinations in Balbala area by Italian doctors.
2. Anesthesia apparatus	1	With portable ventilator, one vaporizer of anesthesia gas (halothane), and a reducing valve from the oxygen cylinder.	One of the existing anesthesia devices is more than 10 years old and is old and dilapidated. This will replace the existing equipment. The NGO has secured the budget for consumables such as oxygen.

Paul Faure Anti-tuberculosis Hospital	Quantity	Description	Objectives/Remarks
1 General X-ray machine	1 unit	Same specifications as that of General Peltier Hospital. Equipment shall consist of: X-ray high-voltage generator, X-ray tube, X-ray tube holder, X-ray table, film cassette. Maximum current for X-ray tube: 320 mA	Replacement of old and outdated equipment supplied through the past Japanese grant aid project of FY 1991. Recently, WHO supplied 2-years' worth of film, developing solution and fixing solution. The number of X-ray films taken in a day is approximately 50.
2 A set of manual film processing items	1 set	Developing tank, developing tray, dark room lamp, film hanger	The dark room of Paul Faure Anti-tuberculosis Hospital for film processing is large and has a water supply. However, the developing equipment is inadequate. The above-mentioned general X-ray system shall be used effectively.

2-2-4 Implementation Plan

2-2-4-1 Scope of Works

1) Inland transportation

- Vaccines and syringes

They shall be transported from Djibouti Airport to the Central Vaccine Warehouse in Djibouti city.

- Equipment for the Reproductive Health Project

After the equipment is transported by sea to Djibouti Port, it shall be transported to the warehouse attached to the social medical center of the Ministry of Health in Djibouti city.

- Medical equipment for mothers and children

After being transported by sea to Djibouti Port, the equipment shall be transported by land to the final destination (8 target medical facilities),

2) Equipment installation

With regard to the general radiographic system and automatic film processor for General Peltier Hospital and the general radiographic system for Paul Faure Anti-tuberculosis Hospital, installation work including measures against small animals, and instruction in initial operation shall be undertaken.

2-2-4-2 Implementation Schedule

(1) Budgetary year

One year (FY 2000)

(2) Work schedule

Entire work period (from exchange of notes (E/N) to delivery): 8 months

From E/N to contract with supplier: 5 months

Delivery period (from contract with supplier to delivery): 3 months

Accumulate month	1	2	3	4	5	6	7	8	9	10	11	12	13
E n t i r e P e r i o d	▼ Exchange of Notes (E/N)	▼ Signing on Consultant agreement											
	■ Final confirmation of the Project details	□ Formulation of the Tender document	■ Approval of Tender document	▼ Tender Notification	□ Site explanation, delivery of draft	■ Tendering, Tender evaluation	▼ Signing on Supply contract						
	□ Approval of equipment specification	■ Manufacturing and procurement of equipment	■ Inspection before shipping	■ Transportation of the equipment	■ Inspection/Handing over								
Procurement supervision Approx. 3 monthes													

■ Local work □ Domestic work ■ Third country work

2-3 Obligations of Recipient Country

The obligations of the recipient country in implementing the Project are described below. The related parties of Djibouti promised the Japanese government to implement the following.

- (i) To secure the warehouse necessary for storing the equipment procured by the Project.
- (ii) To bear the expenses incurred in transporting the equipment procured by the Project to the final destination site after it is delivered to Djibouti, according to the clauses agreed by both parties. For this reason, the Djibouti side shall take proper budgetary measures.
- (iii) To ensure proper and effective maintenance and use of the equipment procured for implementation of the Project and the necessary staff for this purpose. To bear all expenses including maintenance costs incurred in implementing the Project, except for the expenses borne by the grant aid.
- (iv) To perform the customs clearance formalities for the equipment to be brought into Djibouti for implementation of the Project and to ensure exemption from import tax and other applicable taxes.
- (v) To pay the fee for issuing the Authorization to Pay (A/P) according to the banking arrangements (B/A) for the Project

Of the equipment to be procured by the Project, installation of the general radiographic systems (General Peltier Hospital and Paul Faure Anti-tuberculosis Hospital) and automatic film processor (General Peltier Hospital)⁷ shall be borne by the Japanese side, including the measures against small animals.

On the other hand, removal of the existing equipment at the above-mentioned sites shall be implemented by the Djibouti side.

The approximate cost of the works borne by the recipient country estimated by the local contractor is shown in Table 9.

Table 9 Contents and approximate cost of the works borne by the recipient country

Equipment name	Work content	Amount
General radiographic system	Removal of existing equipment	US\$130
	Installation of air-conditioner	US\$970
Automatic film processor	Removal of existing equipment	US\$130
	Installation of air-conditioner	US\$970
Total		US\$2,200

⁷ Filling in of spaces in the floor and wall surfaces to shut off the invasion routes of small animals, interior work, etc.

2-4 Project Operation Plan

(1) Vaccines

All the vaccines procured by the Project must be stored away from direct sunlight and kept in a refrigerator or freezer. The necessary storage capacity shall be provided by the present cold chain equipment. However, the climate in Djibouti is high temperatures and high humidity. A speedy transportation system to the local medical facilities with the proper use of cold boxes must be confirmed in order to prevent deterioration by heat. Vaccine monitor cards that indicate temperature changes and are recommended by WHO and UNICEF shall be supplied with the vaccines.

As the quality guarantee period after delivery is a minimum of approximately a year and a half allowing for the transportation period, care must be taken to ensure use of vaccines within the limit by a first-in first-out system.

(2) Equipment for the Reproductive Health Project

A budget for maintenance of the equipment in the Project shall be appropriated for maintenance of the pick-up truck and two copy machines to be supplied for the Reproductive Health Project. A budget shall be appropriated for employment of a driver, insurance premium, fuel costs, and purchasing of consumables. The budget shall be US\$20,000 for two years. The cost of maintaining the equipment in the Project is estimated at US\$1,580, a year as shown in Table 10, which is within the capability of the budget.

Table 10 Estimation of the maintenance costs of equipment

Hospital name	Equipment name (quantity)		Consumables and spare parts	Annual costs		Remarks
				Consumables	Replacement parts	
Family Planning	Pick-up truck	1	4 tires Diesel oil	US\$270 US\$290		Total cost US\$1,580
	Copy machine	2	Toner, drum	US\$172	US\$420	
Sub-total				US\$1,160	US\$420	

(3) Medical equipment for mothers and children

- Hospital management policy in Djibouti

As a result of accepting refugees from Ethiopia and Somalia, the per capita GNP of Djibouti rose and fell repeatedly with the increase of population, and the economy is still depressed.

On the other hand, the government of Djibouti is trying to tighten finance in accordance with the structural adjustment guidance of the IMF and World Bank, and is also reducing the workforce. In the past, the French government took over hospital operating funds and

equipment maintenance funds. However, recently this kind of financial cooperation has become less frequent. Therefore, not only purchasing of equipment by their own funds but securing of maintenance costs is becoming more difficult.

Considering the situation described above, the Ministry of Health in Djibouti plans to implement a "policy of the beneficiaries (patients) paying for medical services" and is looking into the restructuring of hospital finance using the self accounting system which it has partially implemented.

- Estimation of maintenance costs

The operating budgets of the hospitals targeted in the Project for fiscal 2000 are shown in Table 11.

Table 11 Operating budgets of the main target hospitals in FY 2000

Currency: US\$

Item	General Peltier Hospital	Balbala Hospital	Paul Faure Anti-tuberculosis Hospital	Central Medical Hospital of Obock	Central Medical Hospital of Ali Sabieh
Facility maintenance costs and office expenses	16,000	1,900	2,700	1,300	1,400
Fuel costs and utility costs	8,900	3,400	-	1,200	1,800
Cost of purchasing patients' food	267,000	-	-	16,700	16,700
Costs of drugs and consumables	15,760	-	27,000	7,300	7,300
Patient transportation costs	36,800	-	1,300	3,000	3,000
Other	165,740	3,000	3,500	3,500	4,300
Total	505,200	8,300	34,500	33,000	34,500

Source: Budget for the National Project of the Republic of Djibouti for FY 2000

The results of estimation of the cost for maintaining the equipment are shown in Table 12. The total maintenance costs after implementation of the Project will be approximately 3.2 million yen. The maintenance costs for each hospital account for 0.3% to 12% of the operating budget, which is within the capability of each hospital.

Table 12 Estimation of maintenance costs at each target facility

Hospital name	Equipment name (quantity)	Consumables and replacement parts	Annual costs	Remarks	
General Peltier Hospital	Phototherapy unit	2	Fluorescent light	¥15,000	Costs borne by the hospital Total: ¥1,809,000 Percentage of the total operating costs of the hospital: 3.4%
	Diagnostic ultrasound system	2	Recording paper, probe, gel	¥1,495,000	
	Delivery monitor	3	Recording paper	¥35,000	
	General radiographic system	1	Film	¥6,000	
	Automatic film processor	1	Developing solution, fixing solution, parts set	¥165,000	
	Copy machine	1	Toner, drum	¥61,000	
	Ambulance	1	4 tires	¥32,000	
Sub-total			¥1,809,000		
Dar El Hanan Hospital	Diagnostic ultrasound system	1	Probe etc.	¥1,165,000	Costs borne by the hospital Total: ¥1,258,000 Percentage of the total operating costs of the hospital: unknown
	Copy machine	1	Toner, drum	¥61,000	
	Ambulance	1	4 tires	¥32,000	
Sub-total			¥1,258,000		
Balbala Hospital	Ambulance	1	4 tires	¥32,000	Costs borne by the hospital Total: ¥107,000 Percentage of the total operating costs of the hospital: 12.3%
	Anesthesia apparatus	1	Halothane, tube	¥75,000	
Sub-total			¥107,000		
Paul Faure Anti-tuberculosis Hospital	General radiographic system	1	Film	¥6,000	Costs borne by the hospital Total costs: ¥11,000 Percentage of the total operating costs of the hospital: 0.3%
	Manual film processor	1	Developing solution, fixing solution	¥5,000	
Sub-total			¥11,000		
Total			¥3,185,000		

The Ministry of Health in Djibouti plans to implement a "policy of the beneficiaries (patients) paying for medical services" with the aim of restructuring hospital finance using the self accounting system, and it has implemented this policy at Dar El Hanan Hospital (Table 13). By estimating the maintenance costs based on the income and expenditure of Dar El Hanan Hospital, a reserve fund of approximately US\$29,000 a year can be secured, and an increase in income related to ultrasound examinations can be expected with the procurement of the diagnostic ultrasound system.

Therefore, it is considered possible to maintain the equipment to be procured by the Project.

Payment of examination costs by the patients is to be introduced at other main hospitals such

as General Peltier Hospital. With the introduction of the self-support accounting system, each hospital shall be able to secure its own budget and ensure the maintenance funds for the equipment.

Table 13 Results of paying examination costs by patients at Dar El Hanan Hospital

Item	Period	Djibouti franc			
		Examination charges	Ultrasound examination	Hospitalization charges	Total
Income	August	43,400	104,500	300,000	447,900
	September	56,600	134,000	442,000	632,600
Total					1,080,500
Expenditure	August, September				309,260

- Maintenance ability

General Peltier Hospital has a medical equipment maintenance department where a specialist dispatched from the French Cooperation continuously provides technical instruction. Only General Peltier Hospital has a department in charge of the maintenance of hospital equipment, and the department is responsible for maintenance of the medical equipment in medical facilities all over the country.

The above-mentioned maintenance department employs one French specialist and two Djibouti engineers. The two Djibouti engineers have basic knowledge and technical skills in electrical and electronic engineering and relating to the equipment, and attended courses in medical equipment maintenance provided by JICA in 1990 and 1994. Furthermore, Japan Overseas Cooperation Volunteers (in the field of maintenance of medical equipment) shall be dispatched (after 2001) and the improvement of maintenance skills can be expected in the future.

Chapter 3 Project Evaluation and Recommendations

3-1 Project Effect

The government of Djibouti is endeavoring to improve maternal and child health conditions and reinforcement of immunization by giving priority to measures against infectious diseases. It is conducting activities in the field of immunization reinforcement with the urgent objective of restoring routine immunization coverage, and in the field of maternal and child health, of reducing maternal mortality rate. However, these projects are still difficult to promote. Under these circumstances, implementation of the Project is significant and the following effects can be expected.

Table 14 Effects of Project Implementation

Present Situation and Problems	Measures in the Project	Effects of the Project
1. Immunization-related equipment		
In Djibouti, routine immunization activities have stagnated recently and some areas are defenseless against diseases that can be prevented by immunization. For this reason, there is concern that a large disaster will occur once a disease becomes prevalent.	The local UNICEF office shall procure the basic vaccines for 2001 in lieu of UNICEF so that UNICEF can place more importance on the study of infectious diseases and personnel training.	If the Project is implemented, immunization coverage shall improve, the UNICEF budget shall be allocated to immunization activities, and immunization activities shall be invigorated.
2. Equipment for Reproductive Health Project		
The Ministry of Health in Djibouti has emphasized activities regarding measures to prevent the deaths of expectant and nursing mothers, but the mortality rate has not improved.	By procuring the equipment necessary for implementation of the Reproductive Health Project, the burden on the Ministry of Health in Djibouti shall be reduced.	The Project shall contribute to reducing maternal mortality by strengthening and improving the Family Planning Centers, which are the activity bases for the Project, procuring equipment for training and mobile instruction, and directly supporting the educational activities and examinations of child-bearing age women.
3. Medical equipment for mothers and children		
Although General Peltier Hospital, Dar El Hanan Hospital, and Balbala Hospital are the supporting medical facilities in charge of perinatal medical services directly affecting maternal and child health, they cannot replace or supplement equipment due to financial tightness, which has resulted in a reduction of medical activities	The Project shall procure basic medical equipment for the above-mentioned support facilities to replace or supplement old or unrepairable equipment due to deterioration over time.	With the replacement and supplementing of equipment, the obstetric medical activities of the target hospitals shall be regenerated and strengthened and the original functions of the target facilities shall be restored. The Project shall directly contribute to the reduction of maternal mortality.
One of the causes of the high mortality rate among mothers in Djibouti is the low quality of medical staff at the terminal medical facilities. In addition, the severity of patients' illnesses cannot be properly determined due to the lack of basic diagnostic equipment.	The Project shall procure basic equipment such as a Doppler fetal heart detector, diagnostic ultrasound system, and vacuum extractor.	With the procurement of the equipment, diagnostic accuracy shall be improved, the burden on the General Peltier Hospital shall be reduced, and more lives of mothers and children really needing emergency treatment shall be saved.

3-2 Technical Cooperation and Linkage with Other Donors (Recommendations)

Improvement of maternal and child health in Djibouti requires continuous procurement of medical equipment and consumables, maintenance of cold chain equipment and medical equipment, and securing of human resources (training of managers and staff). Health education of local residents including mothers, and ante-natal and post-natal examinations are also important. On the other hand, implementation of the above-mentioned measures by the government of Djibouti is considered difficult. Therefore, the support of international organizations such as UNICEF, WHO, and UNFPA as well as the support of NGOs such as AMDA is necessary.

There are no concrete plans for technical cooperation by Japan other than the dispatch of Japan Overseas Cooperation Volunteers to the medical equipment maintenance department of General Peltier Hospital. However, the Ministry of Health in Djibouti expressed a desire for implementation of technical cooperation to strengthen maternal and child health and support tuberculosis control.

From the standpoint of the effective use of the equipment to be procured by the Project, technical cooperation by Japan or technical cooperation activities linked with international organizations is desirable.

5-3 Recommendations

The following measures are recommended for the smooth execution of the Project and proper maintenance and operation of the equipment.

(1) Training of medical employees

From the standpoint of proper implementation of immunization activities, the government of Djibouti must place importance on improving the skills of related parties such as nurses and vaccine warehouse managers.

Likewise, for the proper maintenance of medical equipment, the government must boost training projects to train or retrain staff in charge of maintenance of the medical facilities by inviting engineers from nearby manufacturers as lecturers.

In parallel with the training and educational activities of the above-mentioned related parties, it will be effective to improve manuals and guidelines as well as examine concrete measures including support from international organizations and other foreign countries.

(2) Monitoring activity

1) Vaccines

Evaluation after implementation of NID's is conducted with the technical and financial support of WHO. However, proper monitoring of routine immunization activities has not been conducted due to the lack of means of communication and staff. Therefore, there are no clear records regarding the ordering of vaccines, results of vaccine use, and vaccine wastage.

The present monitoring system needs to be improved to enable proper inventory management of vaccines, and wastage such as expiration of vaccines caused by lack of stocks or excessive stocks at local health centers must be reduced.

2) Medical equipment

To ensure effective use of the equipment, monitoring of the frequency of use of the procured equipment, existence of faulty equipment, and regular inspections must be implemented, and a register of consumables and replacement parts kept for better inventory management.

(3) Maintenance agreement with the manufacturers' agents

Some of the equipment to be procured by the Project requires maintenance by the manufacturer's agent. During the first year after the completion of the Project, the guarantee will cover maintenance of the equipment. However, a maintenance agreement must be concluded with the manufacturer's agent after that. The costs incurred for the maintenance agreement will require budgetary measures, such as planned accumulation of funds.

Member List of the Study Team

1. Mr. Miura Kazunori Leader
 Japan International Cooperation Agency

2. Mr. Miyazaki Motonori Equipment Planner
 Japan International Cooperation System

3. Mr. Tsukakoshi Tatsuhiko Procurement Planner
 Japan International Cooperation System

4. Mr. Ishikawa Masashi Interpreter
 Japan International Cooperation Center

Survey Schedule

Appendix 2

No	DATE		ASSIGNMENT	ACCOMMODATION
1	11-Sep	Mon	Tokyo (AF275) → Paris	Paris
2	12-Sep	Tue	Courtesy call and Meeting with the Embassy of Japan, JICA France office, French Cooperation	Paris
3	13-Sep	Wed	Paris (AF538) → Djibouti	Djibouti
4	14-Sep	Thu	Courtesy call and Meeting with the Ministry of Foreign Affaires, Ministry of Health	Ditto
5	15-Sep	Fri	Discussion with local inland transportation companies	Ditto
6	16-Sep	Sat	Meeting with Ministry of Health, Family planning dept., Maternity service in Peltier hospital, Balbala hospital	Ditto
7	17-Sep	Sun	Meeting with UNFPA, WHO, UNICEF office in Djibouti	Ditto
8	18-Sep	Mon	Meeting with UNFPA, French cooperation, Peltier hospital	Ditto
9	19-Sep	Tue	Meeting with the representative of WHO and local NGO	Ditto
10	20-Sep	Wed	Field survey (Discussion and Site Survey on Obock District hospital)	Ditto
11	21-Sep	Thu	Field survey (Discussion and Site Survey on Sagallow dispensary, Tadjourah District hospital)	Ditto
12	22-Sep	Fri	Mission Internal Meeting	Ditto
13	23-Sep	Sat	Meeting with JOCV office in Djibouti, Local manufacturers	Ditto
14	24-Sep	Sun	Discussion and Survey on Peltier Hospital	Ditto
15	25-Sep	Mon	Discussion and Survey on Ministry of Health	Ditto
16	26-Sep	Tue	Discussion and Survey on Balbala Hospital	Ditto
17	27-Sep	Wed	Discussion and Survey on Paul Faure Anti-tuberculosis Hospital	Ditto
18	28-Sep	Thu	Field survey (Discussion and Site Survey on Ali Sabieh District hospital)	Ditto
19	29-Sep	Fri	Internal Meeting Arrival at Djibouti(Team Leader)	Ditto
20	30-Sep	Sat	Meeting with Ministry of Health, Balbala hospital	Ditto
21	1-Oct	Sun	Discussion with representative of UNFPA, WHO Djibouti office, Visiting on Peltier hospital	Ditto
22	2-Oct	Mon	Visiting on Dar El Hanan hospital, AMDA office, Meeting with other related donors	Ditto
23	3-Oct	Tue	Discussion on Minutes of Discussion with Ministry of Health, Signing on Minutes of Discussions	Ditto
24	4-Oct	Wed	Continuous discussions with Ministry of Health, Visiting on central vaccine storehouse	Ditto
25	5-Oct	Thu	Meeting with Family planning dept., visiting Family planning center	Ditto
26	6-Oct	Fri	Survey on Local Medical gas suppliers Leaving Djibouti(Team Leader)	Ditto
27	7-Oct	Sat	Meeting with WHO, UNICEF, AMDA representatives	Ditto
28	8-Oct	Sun	Discussion with MOH about Specifications of the Medical equipment, EPI related goods	Ditto
29	9-Oct	Mon	Discussion with MOH about Specifications of the Medical equipment, EPI related goods	Ditto
30	10-Oct	Tue	Discussion with MOH about Specifications of the Medical equipment, EPI related goods	Ditto
31	11-Oct	Wed	Meeting with Ministry of Foreign Affaires, Attendance of NID's Djibouti (AF533) →	On Boarding
32	12-Oct	Thu	Reporting to the Embassy of Japan, JICA France office Leaving Paris for Tokyo	Ditto
33	13-Oct	Fri	→ Tokyo	

List of Parties Concerned in the Recipient Country

Ministry of Foreign Affaires	Director of International Cooperation International cooperation staff	Mr. Mohamed Ali HASSAN Dr. Mohamede Ali MAHAMADE
Ministry of Health	Minister Secretary general Financial advisor Director of Public Health Director of Financial Management Director of Technical Control EPI Programme coordinator	Mr. Mohamed Dini FARAH Dr. Saleh Banoita TOURAB Dr. Mohamed Mahyoub HATHEM Dr. Daher DAHER Mr. Ali SILAYE Mr. Mohamed Ali KAMIL Dr. Kassim ISSAK
Family Planning Department, MOH	Project coordinator Project coordinator	Ms. Saphia ELMI Ms. Molinira ALI
French Cooperation	Director Technical advisor	Mr. Christophe JEAN Dr. Pierre COCHET
UNFPA	President Programme coordinator	Ms. Mounira Ali AHMED Ms. Aicha Ibrahim DJAMA
UNICEF	President Programme coordinator	Mr. Jorge MEJIA Mr. Roger L BOTRALAHY
WHO	Representative	Dr. Abdourahmane SOW
COOPI	Director of Balbala hospital Project	Dr. Carlo ASTINI
AMDA	Manager of AMDA Project Coordinator for refugee camp	Dr. Hasan KARIM Dr. Kedar THAPA
APS(NGO)	President Member(Pediatrician)	Dr. Evelyn HERHERT Dr. Acina EMMA
Peltier General Hospital	Director Managing advisor (French cooperation) Obstetrician (French cooperation) Obstetrician Director of Maintenance Dept.(French cooperation) Maintenance staff	Dr. Aolen Mohamed DILLEYTA Mr. Gilbert HANN Dr. Lauren STIEN Dr. Pierre COUNET Mr. Depierre MARC Mr. Daoud Daher SOUGUEH

Paul Faure Anti tuberculosis Hospital	Director of Hospital TB Specialist (French cooperation)	Dr. Ali BARREH Dr. Bernatas Jean JACQUES
Dar El Hanan Hospital	Obstetrician(AMDA) Obstetrician	Dr. Mariko ITOH Dr. Samia Mohamed HADI
Ali Sabieh District Hospital	Director of Hospital	Dr. Mohamoud Obsieh ROBLEH
Obock District Hospital	Director of Hospital	Dr. Osman Ali AHMED
Tadjourah District Hospital	Director of Hospital	Dr. Ahmed ROBLEH

Procès-verbal
Étude sur projet de fourniture de matériels
Coopération financière non-remboursable pour la santé de l'enfant
(Programme élargi de vaccination)

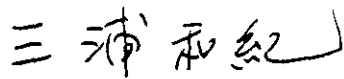
A la suite d'une requête formulée par le gouvernement de la République de Djibouti, le gouvernement du Japon a décidé de mettre en oeuvre une étude sur projet de fourniture de matériels relative à la coopération financière non-remboursable pour l'enfant (Programme élargi de vaccination) (désigné ci-après comme le "Projet") et donné mandat à l'Agence japonaise de coopération internationale (désigné ci-après comme JICA).

La JICA a envoyé, en République de Djibouti du 22 novembre au 14 décembre 1999, une mission d'étude sur projet de fourniture de matériels (désigné ci-après comme la "mission") dirigée par Monsieur Kazunori MIURA, du Bureau de la JICA en France.

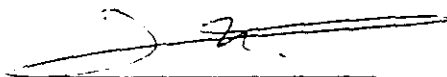
La mission a tenu une série de discussions avec les responsables concernés de la République de Djibouti et effectué une étude sur le terrain dans les zones faisant l'objet de l'étude.

En conséquence des discussions et de l'étude sur le terrain, les deux parties ont confirmé les principaux points mentionnés dans l'appendice.

Djibouti, le 05 décembre 1999



M. Kazunori MIURA
Chef de mission
Mission d'étude sur projet de
fourniture de matériels
JICA



Dr. Saleh Banoïta Tourab
Secrétaire général
Ministère de la santé publique
République de Djibouti

1. Objectif du présent Projet

Le présent Projet a pour objectif d'améliorer l'état de santé de la mère et de l'enfant en faisant baisser la morbidité et la mortalité dues aux maladies préventives par le biais de l'approvisionnement en vaccins et matériels de la chaîne de froid nécessaires.

2. Zones bénéficiaires

Les zones bénéficiaires sont cinq (5) districts ci-dessous dans la République de Djibouti

3. Organisme responsable et organisme d'exécution

L'organisme responsable du présent Projet est le Ministère de la santé publique. L'organisme d'exécution est le Service d'hygiène et épidémiologie dudit ministère..

4. Contenu de la requête formulée par la République de Djibouti

A la suite des discussions avec la mission d'étude, la République de Djibouti a adressé une requête portant sur la fourniture de matériels comme mentionné dans l'annexe 1. Cependant, les composantes finales du Projet seront déterminées après l'analyse approfondie des résultats de l'étude au Japon.

5. Système de la coopération financière non-remboursable du Japon

- (1) La partie djiboutienne a compris le système de la coopération financière non-remboursable mentionné dans l'annexe 2 et expliqué par la mission d'étude.
- (2) La partie djiboutienne a promis d'effectuer des charges mentionnées dans l'annexe 2 nécessaires pour exécuter correctement le Projet en cas de décision de la mise en oeuvre de celui-ci.

6. Autres points

La mission d'étude et la partie djiboutienne ont donné leur accord pour l'exécution des points ci-dessous en cas de la mise en oeuvre du Projet.

- (1) Après approvisionnement par la partie japonaise, les vaccins, seringues et autres seront acheminés jusqu'au magasin central dans la ville de Djibouti. Après réception des matériels et produits par la partie djiboutienne, le transport de ceux-ci jusqu'aux dispensaires des zones bénéficiaires sera effectué par le Ministère de la santé publique djiboutien.
- (2) Parmi les matériels de la chaîne de froid, ceux destinés à deux magasins centraux dans la ville de Djibouti seront acheminés par la partie japonaise jusqu'aux lieux d'installation finaux.

- (3) Parmi les matériels de la chaîne de froid, les réfrigérateurs-congérateurs électriques à baguettes congelées, boîtes froides, portes-vaccins et autres destinés à des dispensaires dans la ville de Djibouti seront acheminés par la partie japonaise jusqu'aux lieux d'installation finaux. Les matériels destinés aux hôpitaux de district seront aussi acheminés par la partie japonaise jusqu'aux lieux d'installation finaux.
- (4) Concernant les réfrigérateurs-congérateurs photovoltaïques solaires figurant parmi les matériels de la chaîne de froid, le transport intérieur et les travaux d'installation seront effectués par le Ministère de la santé publique djiboutien.
- (5) Le transport des autres matériels et produits comprenant les pick-up jusqu'aux lieux d'installations finaux sera effectué par le Ministère de la santé publique comme le cas des vaccins.
- (6) Les pick-up fournis dans le cadre du présent Projet devront être utilisés prioritairement au transport des vaccins et aux activités de vaccination en tournée.
- (7) L'approvisionnement en vaccins dans le cadre du présent Projet se fera au moins après l'installation des matériels de la chaîne de froid pour la conservation des vaccins destinés à la ville de Djibouti.
- (8) Pour discuter des mesures à prendre après la consommation des vaccins fournis par le présent Projet, la partie djiboutienne fera le total mensuel selon les types de vaccins consommés et le rapportera à la partie japonaise et au responsable du bureau local de l'UNICEF au moins tous les six mois.

Liste des matériels et produits sollicités

matériels et produits sollicités	Zones et installations bénéficiaires	Quantité
1. Vaccins		
(1) BCG (10 doses / flacon) (0,05 ml / dose pour moins d'un an)	5 districts	5,439 flacons
(2) BCG (10 doses / flacon) (0,1 ml / dose pour plus d'un an)	5 districts	1,802 flacons
(3) Rougeole (10 doses / flacon)	5 districts	7,242 flacons
(4) DTC (10 doses / flacon)	5 districts	21,725 flacons
(5) VPO (10 doses / flacon)	5 districts	21,758 flacons
(6) Tétanos (10 doses / flacon)	5 districts	12,397 flacons
2. Matériels de la chaîne de froid		
(1) Réfrigérateur-congélateur à baguettes congelées (grande taille) avec onduleur	Deux (2) magasins centraux dans la ville de Djibouti	2 unités
(2) Réfrigérateur-congélateur à baguettes congelées (grande taille) avec onduleur	Hôpitaux dans quatre (4) districts	4 unités
(3) Congélateur électrique (grande taille) avec onduleur	Deux (2) magasins centraux dans la ville de Djibouti	2 unités
(4) Réfrigérateur-congélateur à baguettes congelées (petite taille) avec onduleur	Neuf (9) établissements sanitaires dans le district de Djibouti	9 unités
Sous-total		17 unités
(5) Réfrigérateur-congélateur photovoltaïque solaire	Dispensaires dans quatre (4) districts *	9 unités
Sous-total		4 unités
(6) Glacière	Magasins centraux dans la ville de Djibouti	2 unités
(7) Glacière	Hôpitaux dans quatre (4) districts	4 unités
Sous-total		6 unités
(8) Porte-vaccins (environ 2 litres)	Dix-sept (17) établissements sanitaires dans le district de Djibouti	34 unités
(9) Porte-vaccins (environ 2 litres)	Dispensaires dans quatre (4) districts	34 unités
Sous-total		68 unités
3. Véhicules pour transport de vaccins		
(1) Pick-up double cabine 4x4	Hôpitaux dans la ville de Djibouti et quatre (4) districts	5 unités
(2) Moto (environ 125 cc)	Activités de PEV en ville de Djibouti	6 unités
4. Autres matériels		
(1) Seringue jetable (0,05 ml pour BCG)	Cinq (5) districts	58 boîtes (1.000/boîte)
(2) Seringue autodestructive (0,5 ml)	Cinq (5) districts	331 boîtes (1.000/boîte)
(3) Boîte de sécurité (5 l, en carton)	Cinq (5) districts	3.890 boîtes
(4) Carnet de santé (pour nourisson)	Cinq (5) districts	58.000 exemplaires
(5) Carnet de santé (pour femme enceinte à vacciner le vaccin de tétanos)	Cinq (5) districts	50.000 exemplaires
(6) Registre de la vaccination préventive	Etablissements sanitaires dans tout le pays	83 exemplaires

* Neuf (9) dispensaires: Goubetto, Daasbiyo, Assamou, Gorabous, Dorra, Aidailou, Randa, Alaili-Dada, Waddi

Dispositions que le gouvernement de Djibouti devra prendre en cas de la mise en oeuvre de la Coopération financière non-remboursable du Japon

1. Présenter les informations et données nécessaires à la mise en oeuvre du présent Projet.
2. S'assurer des magasins nécessaires à l'entrepôtage des produits et matériels approvisionnés par le présent Projet.
3. Après la réception des produits et matériels approvisionnés dans le cadre du présent Projet par la partie djiboutienne selon les points d'accord entre les deux parties, se charger des frais nécessaires au transport des produits et matériels jusqu'aux sites. Pour ce faire, la partie djiboutienne prendra préalablement les mesures financières appropriées.
4. Les produits et matériels approvisionnés dans le cadre du présent Projet devront être utilisés et entretenus de façon approprié et efficace pour la mise en oeuvre du présent Projet. S'assurer aussi du personnel nécessaire pour l'exécution du Projet. Se charger de tous les frais de l'entretien et du contrôle nécessaires à la mise en oeuvre du Projet sauf ceux qui seront couverts par le don.
5. Faire les procédures du dédouanement et de l'exonération des droits de douane et taxes imposables sur les produits et matériels importés à la République de Djibouti dans le cadre de l'exécution du présent Projet.
6. A l'égard des ressortissants japonais, fournir des facilités pour l'entrée à la République de Djibouti et le séjour en toute sécurité.
7. Exonérer les produits et services des japonais nécessaires à l'exécution du présent Projet des droits de douanes et taxes imposables.
8. Payer la commission pour l'ouverture du compte bancaire et celles nécessaires pour la notification de l'autorisation de paiement (A/P) conformément à l'arrangement bancaire (A/B) du présent Projet.

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