No.

STUDY REPORT

ON

THE PROJECT FOR EXPANDED PROGRAM ON IMMUNIZATION (THE GRANT AID FOR INFECTIOUS DISEASES CONTROL)

IN

THE REPUBLIC OF BENIN

April 2002

Japan International Cooperation Agency

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PREFACE

In response to a request from the Government of the Republic of Benin, the Government of Japan decided to conduct a study on the Project for Expanded Program on Immunization (Grant Aid for Infectious Diseased Control), and entrusted the Japan International Cooperation Agency (JICA).

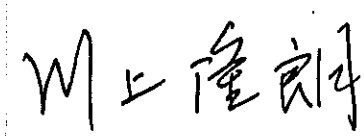
JICA sent to Benin a study team November 26 to December 18, 2001.

The team held discussions with the officials concerned of the Government of the Republic of Benin, and conducted a field survey at the study area. After the team returned to Japan, further studies were made. Then, a mission was sent to the Republic of Benin, the present report was finalized.

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 Benin for their close cooperation extended to the team.

April 2002



Takao Kawakami

President

Japan International Cooperation Agency

Letter of Transmittal

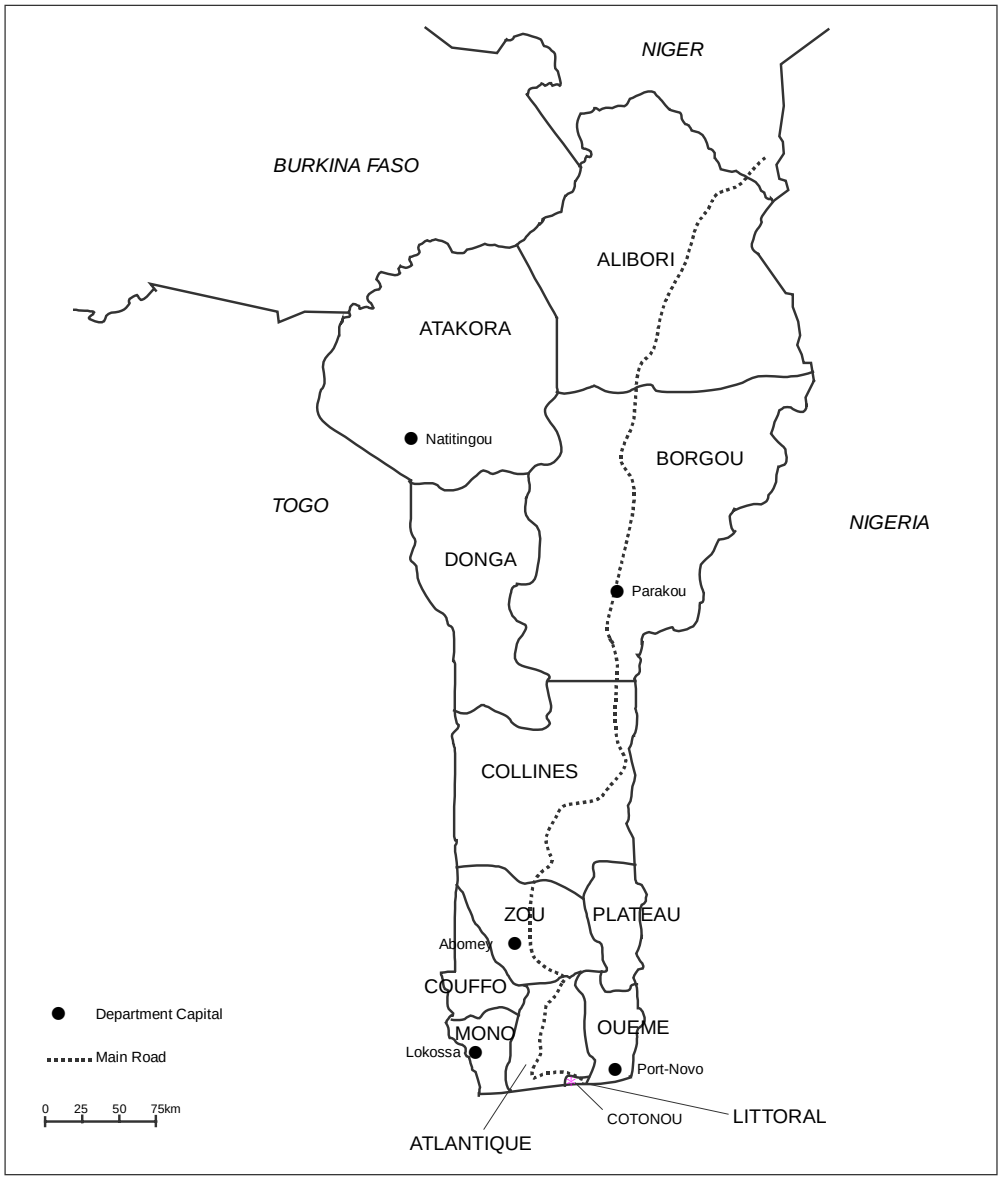
We are pleased to submit to you the study report on the Project for Expanded Program on Immunization.

This study was conducted by Japan International Cooperation System (JICS) under contract of JICA, during the period from November 26 to December 18, 2001. In conducting the study, we have examined the feasibility and rationale of the project with due consideration to the present situation of Benin and formulated the most appropriate basic design for the project under Japan's grant aid scheme.

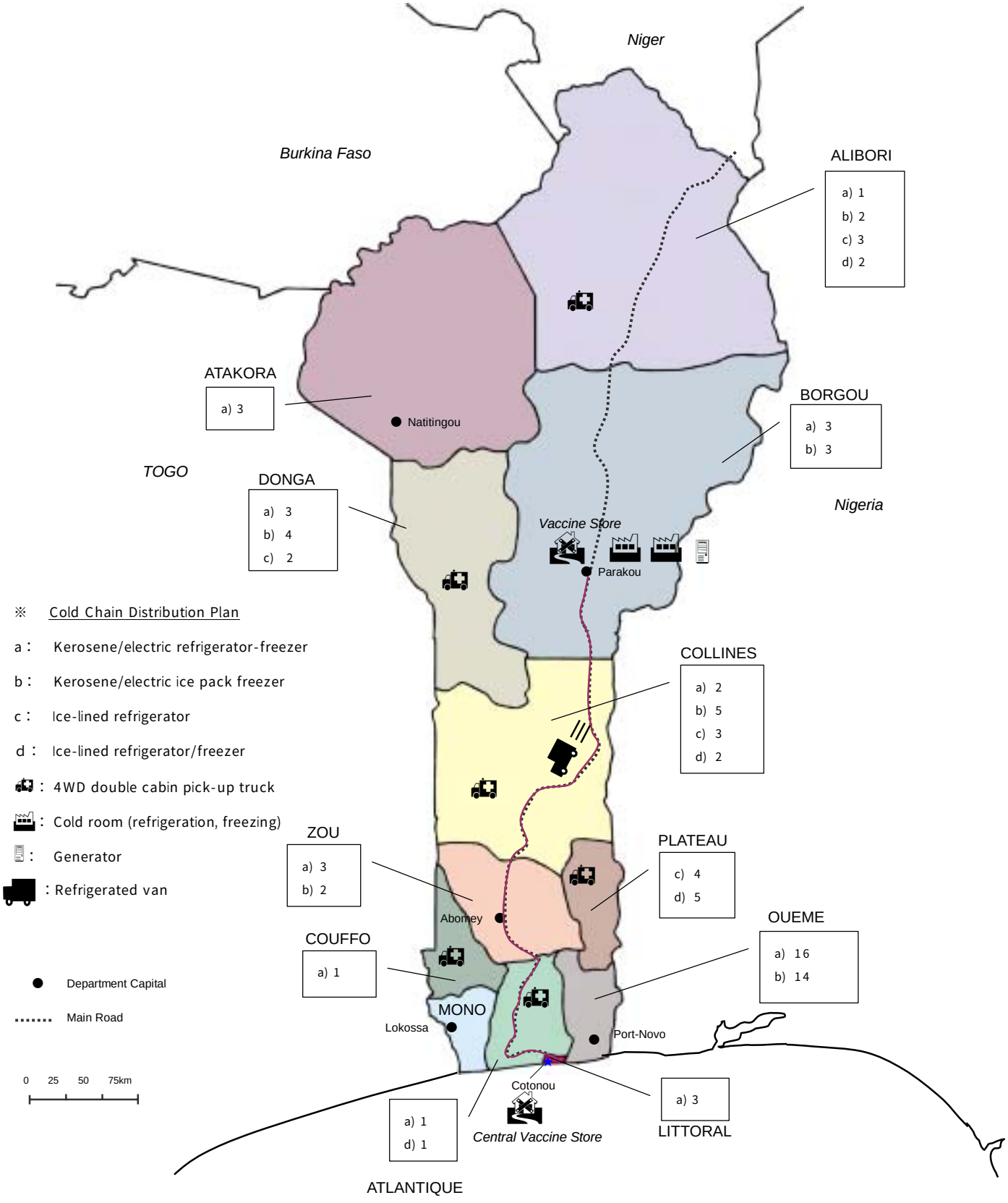
Finally, we hope that this report will contribute to further promotion of the project.

Very truly yours,

Kenji KASHIWAZAKI
Project manager,
Study team on
the Project for Expanded Program on Immunization
Japan International Cooperation System



Republic of Benin



Distribution Plan

Abbreviations

BCG	Bacillus Calmette-Guerin
CSSP	*Centre de Santé de Sous-préfecture*
CSCU	*Centre de Santé de Circonscription Urbaine*
DDSP	*Direction Départementale de la Santé Publique*
DIEM	*Direction des Infrastructures, des Équipements et de la Maintenance*
DPT	Diphtheria-Pertussis-Tetanus Combined Vaccine
E/N	Exchange of Notes
EU/*UE*	European Union */ Union Européenne*
EPI/*PEV*	Expanded Program on Immunization */ Programme Elargi de Vaccination*
NGO	Non-Governmental Organization
ODA	Official Development Assistance
OPV	Oral Polio Vaccine
PHC/*SSP*	Primary Health Care */ Soin de Santé Primaries*
UNICEF	United Nations Children's Fund
WHO	World Health Organization

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Chapter 1 Background of the Project

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The Ministry of Public Health of the Republic of Benin (hereinafter referred to as "Benin") has been placing the Expanded Program on Immunization (EPI[1]) as one of the top priorities in "The National Policy and Strategies for Health Sector Development". After formulating the basic plan in 1982, the government of Benin has been implementing the EPI on a nation-wide basis since 1987. The specific goals of this program include eradication of polio, neonatal tetanus control, and reducing the morbidity of measles. The government has been gradually expanding EPI efforts, such as the procurement of EPI vaccines within the country's own budget, the improvement and construction of immunization posts, and the conduct of mobile immunization activities using automobiles and other transportation means. These efforts resulted in the year-by-year increase in immunization rate, and the rate in urban areas has been maintained at about 80% since 1995. However, the rate still remains in the range from 50 to 60% in rural areas. Some of the infectious diseases addressed by EPI regular immunization, such as measles, even showed resurgence in and after 1998.

Table 1 Trends in the infections (persons)

Vaccine / Year	1997	1998	1999	2000
Polio	2	2	9	1
Measles	1,136	4,463	2,705	5,094
Pertussis	182	149	425	182
Tetanus	218	360	324	325

Source: Directorate EPI/PHC, Ministry of Public Health

Benin experienced epidemics of meningitis and yellow fever in 1998. As the emergency measures against these epidemics, the Ministry of Public Health made emergency procurement of vaccines and promoted a special campaign through the assistance of international organizations, other donors and NGOs. Although these efforts temporarily subdued meningitis and yellow fever that year, there were signs of repeated outbreaks in the next year

[1] EPI: (Expanded Program on Immunization)
A program proposed by WHO in 1974, which consists of administration of 4 vaccines (BCG, polio, DTP, and measles) to infants and tetanus vaccine to expectant and nursing mothers (for prevention of neonatal tetanus).

and after. The Ministry of Public Health had to continue efforts, such as reallocating a part of EPI-related budget to the purchase of meningitis and yellow fever vaccines. As a side effect, this situation caused difficulties in the adequate procurement of 5 vaccines used in routine immunization (EPI), the renewal and purchase of cold-chain equipment, and the execution of continuous training of immunization personnel. In addition, the superannuating of a part of cold-chain equipment procured in 1987 is presenting a serious problem, and rural areas still suffer from the shortage of facilities and equipment. There is considerable concern about the deterioration in the quality of health services nationwide.

In this situation, the government of Benin formulated a plan concerning the procurement of vaccine and cold-chain equipment, which is needed for the control of infections in infants, to be used at healthcare facilities in the whole country, and requested Japanese grant aid for the implementation of this plan.

Chapter 2 Contents of the Project

Chapter 2 Contents of the Project

2-1 Basic Concept of the Project

The purpose of this project is to improve vaccination rate and decrease infant mortality rate through procurement of 5 types of routine vaccines and cold-chain equipment, targeted at all 12 departments of Benin and the principal city Cotonou. By solving the shortage of vaccine supply and facilitating renewal of broken or superannuated cold-chain equipment, the Japanese assistance will support "The 3-year's Plan of Action for Expanded Program on Immunization, 2000-2002", which constitutes a part of "The National Policy and Strategies for Health Sector Development, 1997-2001", in attaining the above-mentioned goals. While the vaccination rate in urban areas of each department is over 80%, the rate in remote villages still remains at a level slightly above 50%. This project aims to improve this discrepancy, so that the average figure will be increased to over 80% by the year 2006 and the infant mortality rate will be decreased.

In order to achieve these goals, this project intends to supply vaccines, syringes, and cold-chain equipment in all areas of Benin, so that it can contribute to the prevention of infectious diseases and improvement of health indices.

2-2 Basic Design of the Requested Japanese Assistance

2-2-1 Design Policy

This project is conducted as assistance to "The 3-year's Plan of Action for Expanded Program on Immunization, 2000-2002" which is promoted for the purpose of reducing infant mortality rate and improving maternal and child health. This project, targeted at all areas of Benin, intends to supply the fund for the procurement of routine vaccines, syringes, cold-chain equipment and vehicles for vaccine transportation.

Vaccines will be procured in quantities needed in the fiscal year 2003. All vaccines will be delivered at the same

time to the cold rooms (2 refrigeration and 2 freezer) of the Ministry of Public Health's Central Vaccine Store in Cotonou.

Among the medical institutions in the 12 departments and the principal city Cotonou, those considered for the procurement of cold-chain equipment are the Central Vaccine Store in Cotonou, department health offices (6 sites), health centers (8 sites), and health posts (46 sites). Cold-chain equipment will be supplied to these medical institutions where replacement is needed urgently due to equipment failures, or where improvement or expansion of facilities has taken place.

Refrigerators procured for use in major urban areas because sufficient power supply is secured there will be electric-powered. However, since the electric power supply is limited to the principal areas (about 20%) of each department, refrigerators that run on both electricity and kerosene will be procured for use at local health centers. These machines can be transported by a small number of persons, they can be installed easily, and WHO training has been conducted on the operation of these units. In view of this situation, they will be delivered to the existing department health offices in 6 departments. After that the Benin side can transport and install them at local health centers by themselves.

As for the cold rooms (refrigeration rooms and freezer rooms) and the power generator to cover them, the Japanese side will assist in the process down to the installation at a facility of the department health office in Parakou, Borgou Department, which is the central city in the northern part of the country. Parakou City is planned to be a transit center for vaccine distribution, as the city is the hub for cargo transport in the northern part of Benin, and is easily accessible from several major cities.

The refrigerated van is intended for vaccine transportation from the Central Vaccine Store to the Northern Central Vaccine Store and department health offices of central and southern departments. This van will strengthen the capability of vaccine distribution system. Four-wheel drive pick-up trucks will be supplied to the planned department health offices of newly established 6 departments. These trucks will be used for logistic and support activities, such as vaccine transportation, public health activities, vaccination monitoring, and monitoring of cold chain equipment.

(1) Equipment selection

①Vaccines

Five types of vaccines that are used for routine immunization in Benin will be procured. These are BCG, OPV, measles, DPT, and tetanus toxiod (for pregnant women) vaccines, and they will be procured in quantities to cover the demand in 1 year during the fiscal year 2003.

②Syringes

Syringes will be procured for use with 4 of the above-mentioned types of vaccines (other than oral polio vaccines).

The 0.05-ml syringes for BCG and 0.5-ml syringes for measles and tetanus (for pregnant women) will be auto disable (AD) type, which automatically are rendered unusable after once used. Ordinary 5-ml syringes will be used for reconstituting lyophilized BCG and measles vaccines.

③Safety boxes

These are cardboard boxes that can hold 100 sets each of the above-mentioned syringes after use. Used for disposal in incinerators.

④Kerosene/electric refrigerator-freezers

These are widely used at health centers and health posts for the purpose of storing vaccines. Each unit has a small capacity for freezing ice packs. Kerosene/electric powered.

⑤Kerosene/electric ice pack freezers

These freezers are used specifically for making ice packs for vaccine cold boxes and vaccine carriers. Kerosene/electric powered.

⑥Icelined refrigerators

These units can refrigerate large quantities of vaccines. Electric powered. They have the ability to continue cold storage over a certain length of time (30 - 40 hours) in case of power failure.

⑦Icelined refrigerator-freezers

These units can freeze ice packs and refrigerate large quantities of vaccines. Electric powered. They have the ability to continue cold storage over a certain length of time (30 - 40 hours) in case of power failure.

⑧Cold room (refrigeration)

This will be installed in the department health office in Parakou, the central city of northern Benin.

A storage capacity of about 15 m^3 will be provided for the storage of large quantities of vaccines requiring refrigeration.

⑨Cold room (freezing)

This will be installed in the department health office in Parakou, the central city of northern Benin.

A storage capacity of about 15 m^3 will be provided for the storage of large quantities of vaccines requiring freezing (-20 ℃).

⑩Power generator

This is the back-up power supply for the above-mentioned cold rooms. Operated automatically at the time of power failure. Power generation rating 60 kVA. Fueled with gas oil.

⑪Refrigerated van

This is a 4-ton payload class vehicle with the cargo capacity of about 12 m^3. Considering the cost of maintenance, the engines will be fueled with gas oil, which is less expensive than gasoline.

⑫Four-wheel drive vehicles (Double cabin pick-up truck)

These are Pick-up type, double cabin 4-WD vehicles that can travel unpaved roads during mobile health activities. Considering the cost of maintenance, the engines will be fueled with gas oil, which is less expensive than gasoline.

(2) Rationale for the calculation of quantities to be procured

The quantities of the routine vaccines, syringes, and safety boxes to be procured under this project will be based on the calculation from the size of target population in each department.

Table 2. Target population for immunization (2000)

Department	Alibori	Atakora	Atlantique	Borgou	Collines	Couffo	Donga	Littral	Mono	Oueme	Plateau	Zou	Benin
Infant	23,209	21,701	26,533	29,387	18,181	21,889	14,203	24,423	11,962	28,714	14,978	26,085	261,266
CBAW	144,812	135,408	165,556	183,363	113,443	136,579	88,623	152,389	74,638	179,165	93,460	162,758	1,630,194

Source: Calculated from responses to questionnaire. CBAW: Child bearing aged women

①Vaccines

Calculation was based on the following formula:

Quantity of vaccine required = { (Target population x Target immunization rate x Number of administration x Loss coefficient) + Reserve doses } / Doses per vial[2]

The quantities were determined as shown in Table 3.

Table 3. Quantities of vaccines to be procured

Vaccine	Target population	Target rate	Times	Loss coeff.[3]	Reserve doses[4]	Doses required	Doses per vial[5]	**Vials to be procured**
BCG	261,266	95%	1	3.125	193,908	969,542	20	**48,000**
OPV	261,266	85%	4	1.639	364,059	1,820,296	20	**91,000**
Measles	261,266	90%	1	2.083	122,468	612,342	10	**61,000**
DPT	261,266	85%	3	1.370	228,160	1,140,802	10	**114,000**
Tetanus for pregnant women	1,630,194	95%	2	1.493	1,155,735	5,778,673	10	**577,000**

Source: Response of the Ministry of Health to our inquiry.
* The quantities of vials to be procured have been rounded down to the nearest thousand.

②Syringes and safety boxes

Calculation was based on the following formula:

[2] Dose: A dose is the amount of vaccine liquid administered to one person at one time.
[3] Loss coefficient: Once opened, any leftover vaccines that are not used in a day must be discarded. The percentage of such loss is called the loss rate. Benin's Ministry of Health has specified the loss coefficient for each vaccine based on the loss rate, and this coefficient is used as a multiplier in the calculation of vaccine quantities. Loss coefficient = $\frac{100}{(100 - \text{Loss rate})}$
Loss rate for BCG: 68%, oral polio: 39%, measles: 52%, DPT: 27%, tetanus: 33%
[4] Reserve doses: Allowance for anticipated quantities of vaccines that are inadvertently rendered unusable due to breakage or accidents during transportation. In Benin, the percentage of reserve doses has traditionally been assumed to be 25% of the required doses. Generally speaking, a reserve rate of 20 to 30% is added in developing countries. The above figure is considered appropriate in view of the weakness of transportation modals, the insufficient development of cold chain, and other factors in Benin.
Reserve doses = (Target population x Target immunization rate x Number of times of administration x Loss coefficient) x 25%
[5] Vial: A vial is the smallest package unit of vaccines containing one or more doses. In the case of BCG, 20 doses are treated as 1 vial.

Quantity of syringes required = (Target population x Target immunization rate x Number of administration x Loss coefficient) + Reserve stock

It was assumed that the disposal and incineration of AD syringes are conducted using safety boxes, which can hold about 100 syringes each. The quantities of these items were determined as shown in Table 4.

Table 4. Quantities of syringes and safety boxes to be procured

Vaccine	Target population	Target rate	Times	Loss Coeff.[6]	No. of syringes	Reserve		No. of syringes reqired			Safety boxes
						Reserve rate[7]	Qty.	0.05ml	0.5ml	5ml*	
BCG	261,266	95%	1	1.18	292,879	25%	73,220	366,099	-	14,644	3,661
OPV	261,266	85%	4	-	-	-	-	-	-	-	-
Measles	261,266	90%	1	1.18	277,465	25%	69,366	-	346,831	27,746	3,468
DPT	261,266	85%	3	1.18	786,150	25%	196,537	-	982,687	-	9,827
Tetanus for pregnant women	1,630,194	95%	2	1.18	3,654,895	25%	913,724	-	4,568,619	-	45,686
Qty. to be procured								366,000	5,898,000	42,000	63,000

Source: Response of the Ministry of Health to our inquiry.
* The numbers of syringes required have been rounded down to the nearest thousand.

The number of 5-ml* syringes required has been calculated from { (Target population x Target immunization rate x Number of administration x Loss coefficient) + Reserve stock } / Doses per ampoule (BCG: 20 doses, measles: 10 doses), as shown in the table.

③Refrigerators and Freezers

Quantities were determined after examining the consistency of items listed according to departments and institutions in the request from the Benin government and also considering the field study results (Table 5). Although 50 units each were listed in the original request, it was decided to procure equipment for replacement of

6 Loss coefficient: Allowance for anticipated quantities that will have to be discarded due to misuse or breakage. The Ministry of Health assumes the loss rate to be 15%. The loss coefficient is calculated from the following formula:

$$\text{Loss coefficient} = \frac{100}{(100 - \text{Loss rate})}$$

7 Reserve rate: A reserve stock will be secured as a provision against the inability to meet demand in difficult supply conditions. The reserve rate is assumed to be 25% in Benin.

markedly superannuated units and that for newly established facilities.

Table 5. Quantities of refrigerators to be procured

No.	Department	Health Facilities	Number of target facilities	Name of equipment			
				Kerosene refrigerator-freezer	Kerosene ice pack freezer	Ice-lined refrigerator	Ice-lined refrigerator-freezer
1	Atakora	Department Health Office	0				
		Health centers	1	1			
		Health posts	2	2			
2	Donga*	Department Health Office	1				1
		Health centers	1			4	1
		Health posts	3	3			
3	Atlantique	Department Health Office	1				1
		Health centers	1	1			
		Health posts	3	3			
4	Littoral	Department Health Office	0				
		Health centers	0				
		Health posts	3	3			
5	Borgou	Department Health Office	0				
		Health centers	3	2	3		
		Health posts	1	1			
6	Alibori	Department Health Office	1				1
		Health centers	1		2	3	1
		Health posts	1	1			
7	Mono	Department Health Office	0				
		Health centers	0				
		Health posts	0				
8	Couffo	Department Health Office	1				1
		Health centers	0				
		Health posts	0				
9	Oueme	Department Health Office	0				
		Health centers	0				
		Health posts	18	16	14		
10	Plateau	Department Health Office	1				1
		Health centers	0				
		Health posts	7	4	5		
11	Zou	Department Health Office	0				
		Health centers	0				
		Health posts	3	3	2		
12	Collines	Department Health Office	1				1
		Health centers	1			3	1
		Health posts	5	2	5		
13	Cotonou City	Central vaccine store	1				1
	Sub-total	Department Health Office	6				
		Health centers	8				
		Health posts	46				
		Central vaccine store	1				
Total			61	42	31	10	10

Source: Calculated from the response of the Ministry of Health to our inquiry.
* The institutions in Donga Department were created newly in 2001.

④Cold rooms

Cold rooms (1 refrigeration room and 1 freezer room) will be installed at Borgou Departmental Health Office in Parakou, the central city in the northern part of Benin, to function as the hub of the cold chain in northern Benin. The refrigeration room and the freezer room will be installed in 2 rooms in the warehouse of the Department

Health Office. A unit of power generator (stand-by type) will be installed as the emergency back-up power supply for these rooms in the event of power failure.

The required capacity of these cold rooms is determined so that it will be sufficient for storage of routine vaccines, as well as the vaccines for endemic diseases such as meningitis and yellow fever.

⑤Vehicles

(1) Refrigerated van

One vehicle with 12 m^3 cargo capacity will be supplied to the EPI Section, Directorate of EPI and Primary Health Care, Ministry of Health in Cotonou.

In addition to the transportation of vaccines to the North Vaccine Store in Parakou, this refrigerated van will also be utilized for vaccine transportation to the distribution centers in 4 departments in the central and southern parts of Benin.

(2) Four-wheel drive vehicles

Because the 6 new department health offices, which are to be established during fiscal year 2001, have not vehicles, one double-cabin pick-up truck will be supplied to each offices. These will be used for the purpose of immunization monitoring activities, public health activities related to immunization, hygiene education and other enlightenment activities, vaccine distribution, maintenance of cold-chain equipment in each department.

2-2-2 Basic Design

The appropriateness of the quantities to be procured has been examined based on the request from Benin, "The Health Sector Development Program" of Benin, the WHO study on cold-chain equipment in 1997, related future plans, vaccine distribution system, field survey results, etc. (Table 6).

Table 6. List of equipment to be procured

No.	Name of equipment	Purpose	Quantity
1	BCG	20 doses/vial; for prevention of tuberculosis	48,000
2	Oral polio vaccine	20 doses/vial; for prevention of polio	91,000
3	Measles vaccine	10 doses/vial; for prevention of measles	61,000
4	DPT (diphtheria, pertussis, tetanus)	10 doses/vial; for prevention of diphtheria, pertussis, and tetanus	114,000
5	TT (tetanus toxoid)	10 doses/vial; for prevention of tetanus in pregnant women	577,000
6	Autodisable syringes, 0.05 ml	For BCG vaccine	366,000
7	Autodisable syringes, 0.5 ml	For vaccination except BCG and polio	5,898,000
8	Syringes, 5 ml	For reconstitution of lyophilized vaccines (BCG and measles)	42,000
9	Safety boxes	For disposal and incineration of syringes	63,000
10	Kerosene/electric refrigerator-freezer	Supplied to newly established health centers and as replacement for broken existing units; for vaccine storage	42
11	Kerosene/electric ice pack freezer	Making ice packs used for vaccine transportation from health centers to immunization sites in villages	31
12	Ice-lined refrigerator	Electric-powered; to be used at health facilities in major cities. For storage of vaccines requiring refrigeration	10
13	Ice-lined refrigerator-freezer	Electric-powered; to be used at health facilities in major cities. For storage of vaccines requiring refrigeration and making ice packs	10
14	Cold room (refrigeration room)	Installed at the distribution center in Parakou for northern local cities to facilitate vaccine supply. For vaccines requiring refrigeration	1
15	Cold room (freezer room)	Installed at the distribution center in Parakou for northern local cities to facilitate vaccine supply. For frozen vaccines and making ice packs	1
16	Generator	Back-up power supply for the above cold rooms	1
17	Refrigerated van	For vaccine transportation mainly from the Central Vaccine Store to the northern distribution center and also for distribution to other destinations	1
18	4WD Double-cabin pick-up truck	Supplied to 6 newly established department health offices. For monitoring activities, vaccine transportation, transfer of equipment for repair, etc. 4WD vehicles that can travel on unpaved roads.	6

2-2-3 Implementation Plan

2-2-3-1 Implementation Policy

The equipment and materials will be procured from Japan and third countries. The procurement will be implemented through open tendering assigning a Japanese trading firm as the supplier. The items procured from third countries will be subjected to pre-shipment inspection, which will be entrusted to an inspection agency. Engineers will be dispatched to assist installation of cold rooms and power generator, as well as the initial guidance on operation and maintenance.

The Directorate of EPI/PHC of Ministry of Public Health is the responsible implementing agency. It will bear responsibility for the distribution and maintenance of equipment, and also conduct workshops for training maintenance and repair engineers.

(2) Special considerations concerning procurement

Considering road conditions, installation of equipment should be completed before the rainy season. The procurement from third countries should be planned to meet this schedule.

2-2-3-2 Scope of Works

Table 5 shows the division of work between Benin and Japan concerning procurement and installation. Except for cold rooms and power generator, the distribution of equipment from the site of delivery to department health offices and health centers will be conducted by the Benin side, as well as the training of maintenance engineers.

Table 7. Division of work

Division	Content
Japan	Procurement of vaccines and equipment Transportation of equipment to the site of delivery Installation of cold rooms (refrigeration and freezer rooms) and power generator
Benin	Distribution of vaccines and equipment from the site of delivery to target institutions Guidance on the maintenance of equipment and training of repair engineers

2-2-3-3 Consultant Supervision

An on-site procurement supervisor will be dispatched from Japan to perform general coordination tasks concerning receipt, sorting, delivery, etc. of procured equipment and materials in Benin. A Japanese engineer and a technician will be dispatched for the installation of 2 cold rooms (refrigeration and freezer rooms) and power generator, as well as initial guidance and basic maintenance guidance. In addition, local workers will be employed for the implementation of installation work.

2-2-3-4 Procurement Plan

From the standpoint of quality assurance, routine vaccines procured under this project will be the products complying with the WHO standards. The suppliers will be manufacturers holding pre-qualification by the WHO. BCG will be procured from Japan and other vaccines will be procured from third countries.

Syringes and safety boxes to be procured will be selected from the equipment items recommended by the WHO for the Expanded Program on Immunization. Because these items are not manufactured in Japan, they will be procured from third countries.

Cold-chain equipment will also be selected from the products complying with the WHO standards. Because no such products are manufactured in Benin or Japan, they will be procured from third countries. Because cold rooms and power generators are manufactured by more than one Japanese manufacturer, they will be procured from Japan. Vehicles can be procured from several Japanese manufactures.

Although it is possible to obtain spare parts for vehicles from official dealers in Benin, considerable time may be required before receiving necessary parts and prices are high, leading to a possibility of budget shortage. Hence, these items will be procured in assortment and quantities needed in about 2 years.

As for cold rooms, freezers, refrigerators, and power generator, spare parts will be procured in assortment and quantities recommended by the manufactures.

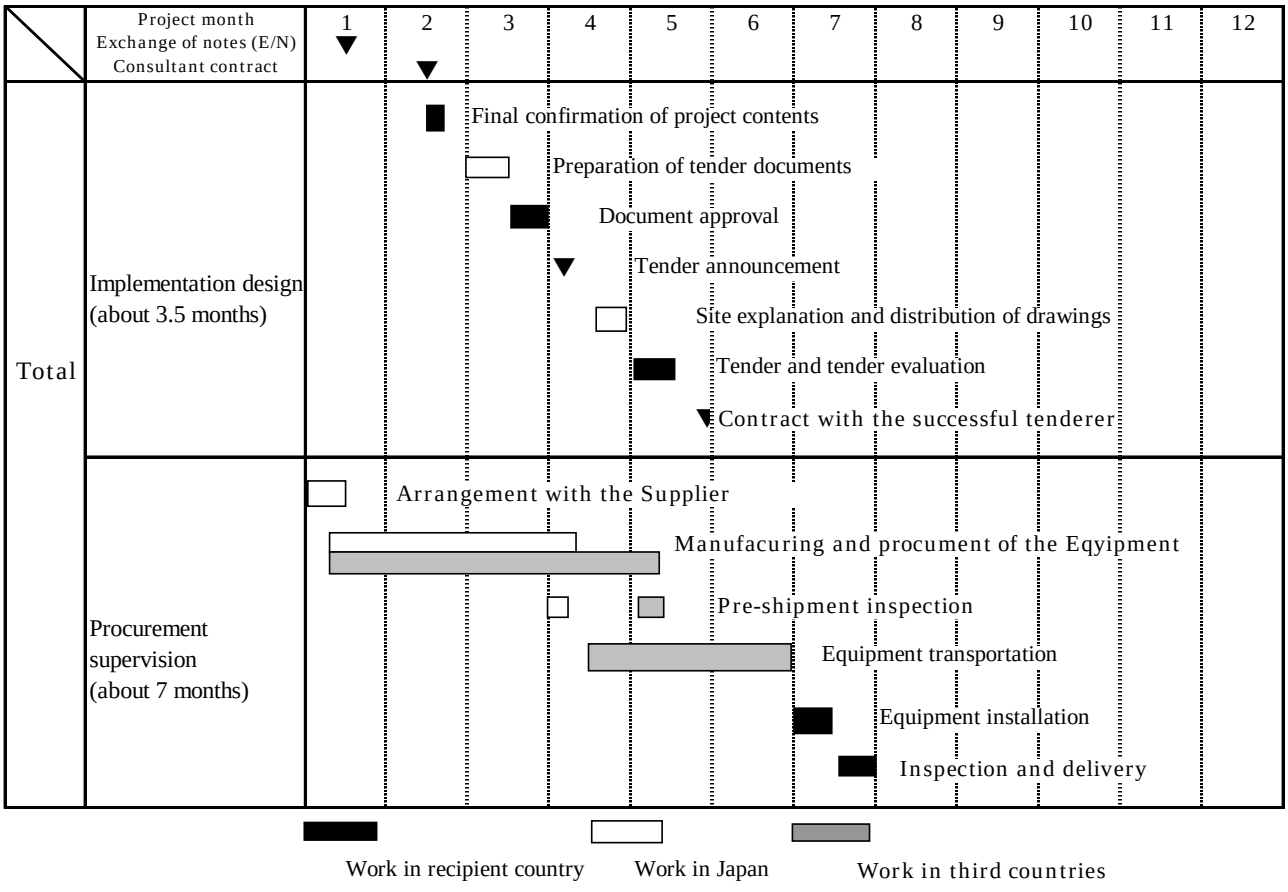
Modes of transportation

Because vaccines require temperature-controlled transportation (at 2 to 8 ℃), they will be transported by air from manufacturing countries to Benin. Because other equipment items need no special attention to the temperature during transportation, they will be transported by sea. The routes of transportation are not specified.

2-2-3-5 Implementation Schedule

Work schedule

Total period of work (from E/N to delivery)	:	10.5 months
From E/N to dealer contract	:	3.5 months
Time of delivery (from dealer contract to delivery)	:	7.0 months



2-3 Obligation of Recipient Country

In implementing this project, the Benin side will bear the following obligations:

①To conduct appropriate and smooth customs clearance of procured equipment and materials, and to bear the costs.

②To secure the warehouse needed for storage of procured equipment and materials.

③To conduct prompt distribution of procured equipment and materials from the warehouse to the final destinations in the country, and to bear the costs.

④To bear the Authorization to Pay (A/P) notification fees and other costs arising from the Banking Arrangement (B/A) for the implementation of this project.

⑤To make budgetary arrangements and secure manpower needed for appropriate operation and maintenance of procured equipment.

⑥To conduct workshops for training maintenance engineers for procured equipment.

2-4 Project Operation Plan

The cold-chain equipment procured under this project will be distributed to department health offices and health centers, and basically used for storing vaccines. The vaccines received by the Immunization Section and stored in the Central Vaccine Store will be transferred to and stored in the refrigerators/freezers of department health offices. Mostly, these refrigerators/freezers for vaccine storage are installed in department hospitals or health centers adjacent to the department health offices. The management of these refrigerators/freezers is often managed under the charge of staff who are qualified as a registered nurse. Necessary quantities of vaccines will be replenished weekly (or biweekly in some areas) from department health offices to health centers, according to the reports on vaccine consumption and inventory from health centers.

There are 2 classes of health centers: CSCUs and CSSPs. Although the situation may vary depending on the population size, each CSCU is usually equipped with a freezer and 1 or 2 refrigerators, each CSSP with a

refrigerator. These refrigerators and freezers are managed by nurses. The nurses take record of storage temperature twice daily, and judge whether or not vaccines are stored appropriately and whether or not the refrigerators/freezers are in good working order capable of appropriate temperature control. The inventory of vaccines in store and the record of temperature control are reported monthly to the department health office. In the case of equipment troubles, simple troubles are repaired by engineers at health centers and department health offices, while serious problems are entrusted to the Directorate of Infrastructure, Equipment and Maintenance (DIEM) via department health offices. Each department health office is staffed with 2 engineers, who perform visiting inspection of the condition of equipment at health centers as necessary. As the DIEM workshop does not have a vehicle dedicated for equipment transportation, vehicles of department health offices are used for this purpose. The transportation of equipment after repair is also conducted using the vehicles of department health offices, entrusted to NGOs, or using private cars of the personnel of the workshop. This situation is causing problems such as a delay in the transportation of equipment needing repair and in performing repair, due to the inability to arrange the use of the vehicles of department health offices for this purpose. The transportation of repaired equipment also suffers from the inability to schedule delivery, and repaired machines are often kept at the workshop for a long time. The provision of vehicles which are dedicated exclusively to this purpose will enable the personnel at the workshop to visit the sites and perform equipment maintenance directly. In addition, it will enable them to give technical training to the staff of health centers, facilitating the skill development of engineers and improvement of efficiency of maintenance work. Thus, the provision of vehicles for equipment delivery and maintenance is necessary.

As for the technical training to the repair engineers of department health offices, a training workshop was conducted in 1999 under the auspice of the WHO. A training workshop is planned to be conducted in fiscal 2003, before the delivery of equipment under this project, targeted at engineers in all departments. Thus, the arrangement concerning the operation and maintenance plan is considered sufficient both in terms of the number of personnel and the skill level.

Chapter 3 Project Evaluation and Recommendations

Chapter 3 Project Evaluation and Recommendations

3-1 Project Effect

(1) Direct Effect

(i) The target population of vaccination including 260,000 infants below 1 year of age and about 1.63 million pregnant women will benefit from appropriate vaccination.

(ii) The provision of a cold room (refrigeration and freezer) and 93 refrigerators will improve the vaccine storage environment and reduce vaccine loss rate.

(iii) The provision of a refrigerated van and 4-wheel drive vehicles will facilitate large-quantity transportation of vaccines, and improve the effectiveness of the EPI's support activities such as public health activities, mobile immunization, and monitoring.

(2) Indirect Effect

This project will be effective in maintaining and expanding the cold-chain system, and is expected to improve the maintenance of the quality of vaccines and increase the immunization rate. This will contribute to the achievement of the immunization rate of 80% or more for DPT vaccine and BCG, Polio eradication , and the 90% immunization rate for measles, which are the goals the Benin government envisions to attain by 2002. As a result, this project is also expected to be effective greatly in the reduction of infant mortality rate.

3-2 Recommendations

The Benin's Ministry of Public Health is considered to have high ability to implement this project. However, it is recommended that attention should be given to the following points:

1) The engineers installing cold rooms and generators should be provided with maps showing the route to

the installation sites, information concerning the details of buildings, and other detailed information (including location maps with measurements and photographs) in advance, so that the installation work may be performed smoothly.

2) While the Benin side has experience in most of the equipment procured under this project, it is necessary to provide additional technical training in the maintenance, management, and repair of various equipment, as well as to promote training of engineers.

3) Because CFCs are used in refrigerators/freezers that will be replaced and disposed of, imprudent disposal would cause the release of CFC gasses that contribute to the destruction of the ozone layer. It is recommended that Japan should, in future, provide assistance concerning the recovery and treatment of CFC gasses used in existing equipment.

On the other hand, WHO and UNICEF are providing assistance to workshop for medical workers concerning vaccination, as well as technical training concerning the maintenance, management, and repair of equipment. The Ministry of Public Health also plans to conduct technical training related to this project. In view of this situation, the provision of technical cooperation related to this project is considered adequate.

(Appendices)

1. Member List of the Survey Team
2. Study Schedule
3. List of Parties Concerned in the Recipient Country
4. Minutes of Discussion
5. References

[Appendix]-1　Member List of the Study Team

Leader

Mr. Tomoyuki ONO

Ministry of Foreign Affairs, Economic Cooperation Bureau, Grant Aid Division

Equipment Planner

Mr. Kenji KASHIWAZAKI

Japan International Cooperation System

Procurement Planner

Mr. Tetsuo KODAMA

Japan International Cooperation System

Interpreter

Mr. Masao MATSUBARA

Japan International Cooperation Centre

[Appendix]-2 Study Schedule

No	Date		Ono	Kashiwazaki / Kodama / Matsubara	Accomm.
1	28/Nov	Wed		Tokyo 12:45 → 17:20 Paris (AF275)	Paris
2	29/Nov	Thu		Paris 10:55 → 18:55 Cotonou (AF858)	Cotonou
3	30/Nov	Fri		MOFA, MOH, EPI/PHC Honorary visit and Meeting	Cotonou
4	1/Dec	Sat		Market Research	Cotonou
5	2/Dec	Sun		Market Research	Cotonou
6	3/Dec	Mon		WHO・EU・UNICEF Honorary visit and Meeting	Cotonou
7	4/Dec	Tue		Visit and interview EPI/PHC	Cotonou
8	5/Dec	Wed		Interview EPI/PHC	Cotonou
9	6/Dec	Thu		Site Survey (Local Health Centres and Vaccination Posts)	Parakou
10	7/Dec	Fri		Site Survey (Local Health Centres and Vaccination Posts)	Abomay
11	8/Dec	Sat		Site Survey (Local Health Centres and Vaccination Posts)	Cotonou
12	9/Dec	Sun	Tokyo 12:45 → 17:20 Paris (AF275)	Market Research	Cotonou
13	10/Dec	Mon	Paris 10:55 → 18:55 Cotonou (AF858)	Interview EPI/PHC	Cotonou
14	11/Dec	Tue	Honorary visit and Meeting, MOH and Unicef		Cotonou
15	12/Dec	Wed	Site Survey, Arrangement of Minutes Discussion		Cotonou
16	13/Dec	Thu	Arrangement of Minutes Discussion		Cotonou
17	14/Dec	Fri	Signing of Minutes Cotonou 21:15 → (AF859)	Signing of Minutes	Cotonou
18	15/Dec	Sat	Paris →	Market Research Cotonou 14:45 → 15:00 Abidjan (MR664)	Abidjan
19	16/Dec	Sun	Tokyo	Market Research	Abidjan
20	17/Dec	Mon		Report Embassy of Japan , Ivory Coast Report JICA Ivory Coast Abidjan 22:50 → (AF703)	on board
21	18/Dec	Tue		06:10 Paris Market Research Paris 23:15 → (AF286)	on board
22	19/Dec	Wed		19:00 Tokyo	

[Appendix]-3 List of Parties Concerned in the Recipient Country

1. Ministére de la Sante Publique

Dr. Moussa YAROU	Director of Cabinet
Dr. Pascal DOSSOU-TOGBE	Secretary General
Dr. Jacques TOSSOU	Director, Directorate EPI/PHC
Ms. Marie-Christine BALLY	Immunization Section, Directorate EPI/PHC
Mr. Thierry HOUNGBO	Chief, Maintenance Service, DIEM
Mr. Faustin AHOUANDJINOU	Staff, DIEM
Mr. Leon G KOHOSSI	Director, Planning Department, Directorate Program and Planning
Ms. Stephanie AGUEREBURU	Director, Evaluation Department, Directorate Program and Planning
Mr. Florentin J. M. ZOSSOU	Planning Analyst, Directorate Program and Planning

2. Ministére des Affaires Estrangéres et de l'intégration Africaine

Mr. Coffi M. RANDOLPH	Managing Director, Directorate for Asia and Oceania
Mr. Seidou BAKO BOUKARI	Deputy Managing Director, Directorate for Asia and Oceania
Dr. Naim AKIBOU	Counselor of Foreign Affairs
Mr. Bienvenu HOUNGBEDJI	Staff, Japan Section

3. DDSP Borogou

Dr. Ibrahima IDRISSOU	Director, PHC Department
Mr. Dominique TAOUEMA	Chief, EPI Section
Dr. Berlin AFFEDJOU	WHO EPI Supervisor

4. DDSP Zou

Dr. Irénée Stanislas KACHOFA	Director
Dr. Ibrahima SEIDOU	Chief, EPI Section

5. Information Department

Mr.Thierry H.P.Dossou	Person in Charge

6. WHO

Dr. P. BAMOUNI	Representative

7. UNICEF

Ms. Esther GULUMA	Representative
Dr. Peter CUPPIN	EPI Advisor

8. EU

Ms. Stéphanie BAUD	Program Officer

9. Republic of Cote d'Ivoire

Yoshifumi HIMENO	Embassy of Japan, Ivory Coast
Toru TOGAWA	Resident Representative, JICA Ivory Coast
Jun YOSHIMIZU	JICA Ivory Coast

Procès-Verbal des Réunions

Etude sur le Projet d'Appui au Programme Elargi de Vaccination en République du Bénin

A la suite d'une requête formulée par la République du Bénin, le Gouvernement du Japon a décidé de mettre en œuvre une étude sur le Projet d'Appui au Programme Elargi de Vaccination en République du Bénin (désigné ci-après comme " le Projet") et donné mandat à l'Agence Japonaise de Coopération Internationale (désignée ci-après comme "la JICA").

La JICA a envoyé, au Bénin du 29 novembre au 15 décembre 2001, une mission d'étude sur le Projet, dirigée par Monsieur Tomoyuki ONO, Service de l'Aide financière à Titre de Don, Direction générale de la Coopération économique du Ministère des Affaires Etrangères, (désignée ci-après comme " la Mission").

Pendant son séjour en République du Bénin, la Mission a tenu une série de discussions avec les autorités compétentes béninoises et effectué une étude sur le terrain dans les zones faisant l'objet de l'étude.

A l'issue des discussions et de l'étude, les deux parties ont confirmé les principaux points mentionnés dans l'appendice.

Cotonou, le 14 décembre 2001

M. Tomoyuki ONO
Chef de Mission d'Etude
Ministère des Affaires Etrangères,
JAPON

M. Pascal DOSSOU-TOGBE
Secrétaire Général
Ministère de la Santé Publique,
République du Bénin

M. Coffi M. RANDOLPH
Directeur Asie et Océanie
Ministère des Affaires Etrangères
et de l'Intégration Africaine,
République du Bénin

Appendice

1. Objectif du présent Projet
   Le présent Projet a pour objectif d'améliorer l'état de la santé de la mère et de l'enfant, en appuyant le Programme Elargi de Vaccination en République du Bénin par le biais de l'approvisionnement en vaccins, matériels d'injection, matériels de la chaîne de froid et véhicules.

2. Zones bénéficiaires
   Les zones bénéficiaires du Projet sont tous les départements de la République du Bénin (ATACORA - DONGA, ATLANTIQUE - LITTORAL, BORGOU - ALIBORI, MONO - COUFFO, OUEME - PLATEAU, ZOU - COLLINES).

3. Organisme responsable et Organisme d'exécution
   Organisme responsable : Ministère de la Santé Publique
   Organisme d'exécution : Direction Nationale du Programme Elargi de Vaccination et des Soins de Santé Primaires

4. Contenu de la requête formulée par la République du Bénin
   A l'issue des discussions avec la Mission, la République du Bénin a adressé une liste révisée des besoins en équipements et matériels comme indiqué dans l'annexe 1.
   La décision finale du cadre du Projet sera prise par le Gouvernement du Japon en considération de tous les aspects.

5. Système de la Coopération Financière Non-Remboursable du Japon
   (1) La partie béninoise a compris le système de l'aide financière non-remboursable mentionné dans l'annexe 2 et expliqué par la Mission.
   (2) La partie béninoise assurera les charges, mentionnées dans l'annexe 3, nécessaires pour le bon déroulement du Projet en cas de décision de la mise en œuvre de celui-ci.

6. Calendrier de l'Etude
   (1) Les ingénieurs-conseils de la Mission continueront l'étude jusqu'au 14 décembre 2001.
   (2) La JICA rédigera un rapport final et l'enverra au Bénin avant le mois de mai 2002.

7. Autres Points
   (1) La partie béninoise a promis de prévoir le budget et le personnel nécessaires à la mise en œuvre du Projet, au cas où l'aide financière non-remboursable lui serait accordée. Elle s'est engagée à assurer les frais de carburant et de maintenance des équipements et des matériels fournis dans le cadre du Projet.
   (2) La partie béninoise s'est engagée à mettre en place un système de suivi semestriel de l'état des équipements et des matériels acquis dans le cadre du Projet.

Annexe 1

LISTE DES BESOINS EN EQUIPEMENTS ET MATERIELS

N°	Désignation	Quantité
1	BCG 20 doses/ampoule	48 400
2	PVO 10 doses/flacon	177 961
3	VAR 10 doses/flacon	58 785
4	DTC 10 doses/flacon	108 262
5	VAT 10 doses/flacon	576 885
6	Seringues Auto-destructives 0,05ml	366 099
7	Seringues Auto-destructives 0,5ml	5 898 136
8	Seringues de dilution 5ml	42 390
9	Boîtes de sûreté	63 066
10	Réfrigérateur électrique ou à pétrole	42
11	Congélateur électrique ou à pétrole	31
12	Réfrigérateur/Congélateur d'accumulateur	10
13	Réfrigérateur mixte	10
14	Chambre froide positive	1
15	Chambre froide négative	1
16	Groupe électrogène	1
17	Camion Frigorifique	1
18	Pick-Up 4X4 Double cabine	6

Annexe 2

PROGRAMME D'AIDE FINANCIERE NON-REMBOURSABLE DU JAPON

1. Procédure de l'aide financière non-remboursable

Le programme d'aide financière non-remboursable est exécuté selon la procédure suivante :

1) Demande (requête effectuée par le pays bénéficiaire)
   Etudes (étude préliminaire/étude du concept de base effectuées par la JICA)
   Estimation et approbation (estimation par le gouvernement du Japon et approbation par le Conseil des ministres du Japon)
   Détermination de l'exécution (Echange de Notes entre les deux gouvernements)
   Exécution (mise en œuvre du Projet)

2) Lors de la première étape, la requête présentée par le pays bénéficiaire est examinée par le gouvernement du Japon (Ministère des Affaires étrangères) afin de déterminer si elle est pertinente dans le cadre de l'aide financière non-remboursable. Au cas où il serait confirmé que la requête est prioritaire en tant que projet d'aide financière non-remboursable, le gouvernement du Japon demande à la JICA de procéder à une étude.

   Lors de la seconde étape, l'étude (étude du concept de base) est effectuée par la JICA ayant conclu un contrat avec une société de consultation japonaise chargée de l'exécution.

   Lors de la troisième étape (estimation et approbation), le gouvernement du Japon décide, sur la base du rapport d'étude du concept de base élaboré par la JICA, si le Projet convient au cadre de l'aide financière non-remboursable. Il est ensuite soumis pour approbation au Conseil des ministres.

   Lors de la quatrième étape (détermination de l'exécution), l'exécution du Projet approuvé par le Conseil des ministres est officiellement déterminée par la signature de l'Echange de Notes entre les deux gouvernements.

   Au fur et à mesure de l'exécution du Projet, la JICA accélérera le processus d'exécution en apportant son soutien au pays bénéficiaire pour la procédure d'appel d'offres, les signatures des contrats et les autres opérations nécessaires.

2. Contenu de l'étude

1) Contenu de l'étude

Le but de l'étude (étude du concept de base) effectuée par la JICA est de fournir un document de base permettant de déterminer si un projet est exécutable ou non dans le cadre du Programme d'aide financière non-remboursable du Japon.

Le contenu de l'étude est le suivant:

a) confirmer l'arrière-plan de la requête, les objectifs et les effets du Projet ainsi que les capacités de maintenance du pays bénéficiaire nécessaires à l'exécution du Projet
b) évaluer la pertinence de l'aide financière non-remboursable du point de vue technologique et socio-économique
c) confirmer le concept de base du plan convenu après discussions entre les deux parties
d) préparer un plan de base du Projet
e) estimer les coûts du Projet

Le contenu de la requête n'est pas obligatoirement approuvé en tant que contenu de l'aide financière non-remboursable. Le concept de base du Projet doit être confirmé par rapport au cadre d'aide financière non-remboursable du Japon.

Le gouvernement du Japon demande au gouvernement du pays bénéficiaire de prendre toutes les mesures qui pourraient s'avérer pour assurer son indépendance lors de l'exécution du Projet. Ces mesures doivent être garanties même si elles n'entrent pas dans la juridiction de l'organisme du pays bénéficiaire en charge de l'exécution du Projet.
Par conséquent, l'exécution du Projet doit être confirmée par toutes les organisations concernées du pays bénéficiaire par la signature du procès-verbal des réunions.

2) Sélection des consultants

En vue de la bonne exécution du Projet, la JICA effectue une sélection parmi les consultants enregistrés auprès de la JICA après avoir procédé à un examen des propositions soumises par ces derniers. Le consultant sélectionné procède à l'étude du plan de base et élabore le rapport sur la base des références fournies par la JICA.

A l'étape de conclusion du contrat entre le consultant et le pays bénéficiaire après l'Echange de Notes, la JICA recommande le même consultant que celui qui a participé à l'étude du concept de base afin d'assurer une cohérence technique entre l'étude du concept de base et le plan détaillé.

3. Plan de l'aide financière non-remboursable du Japon

1) Qu'est-ce qu'une aide financière non-remboursable?
Le Programme d'aide financière non-remboursable accorde au pays bénéficiaire des fonds non-remboursables qui permettront de fournir les installations, les équipements et les services (main d'œuvre ou transport, etc.) pour le développement socio-économique du pays, selon les principes suivants et conformément aux lois et réglementations afférentes du Japon. L'aide financière non-remboursable n'est pas effectuée sous forme de don en nature au pays bénéficiaire.

2) Echange de Notes (E/N)
L'aide financière non-remboursable du Japon est accordée conformément aux Notes échangées entre les deux gouvernements et dans lesquelles sont confirmés, entre autres, les objectifs, la durée, les conditions et le montant de l'aide.

3) La "durée de l'aide" s'inscrit dans l'année fiscale dans laquelle le Conseil des ministres a approuvé le Projet. Toutes les procédures d'aide, Echange de Notes, conclusion des contrats avec le consultant et le contractant et paiement final, doivent être achevées durant cette année fiscale.
Toutefois, en cas de retard lors de la livraison, de l'installation ou de la construction due à des éléments incontrôlables tels que les conditions météorologiques, la durée de l'aide financière non-remboursable pourra être prolongée d'une année fiscale supplémentaire après accord entre les deux gouvernements.

4) L'aide doit être en principe réservée exclusivement à l'achat de produits provenant du Japon ou du pays bénéficiaire, et aux services des ressortissants japonais ou du pays bénéficiaire.
Le terme "ressortissant japonais" signifie les personnes physiques japonaises ou les personnes morales japonaises dirigées par des personnes physiques japonaises.
Lorsque les deux gouvernements le jugent nécessaire, l'aide financière non-remboursable peut être utilisée pour les produits ou les services tels que le transport d'un pays tiers (autre que le Japon ou le pays bénéficiaire).

Toutefois, dans le cadre de l'aide financière non-remboursable, les principaux contractants, à savoir le consultant, l'entrepreneur et la société de commerce nécessaires à l'exécution de l'aide doivent en principe être exclusivement des ressortissants japonais.

5) Nécessité de la vérification

Le gouvernement du pays bénéficiaire ou son représentant autorisé conclura les contrats en Yen japonais avec les ressortissants japonais. Ces contrats seront vérifiés par le gouvernement du Japon. Cette vérification est nécessaire car les fonds de l'aide financière non-remboursable proviennent des taxes des citoyens japonais.

6) Dispositions à prendre par le gouvernement du pays bénéficiaire

Lors de l'exécution de l'aide financière non-remboursable, le pays bénéficiaire devra prendre les dispositions suivantes :

(1) Acquérir, dégager, et niveler le terrain nécessaire pour les sites du Projet, avant le commencement des travaux de construction.

(2) Assurer les installations de distribution d'électricité, d'approvisionnement et d'évacuation des eaux ainsi que les autres utilités nécessaires à l'intérieur et aux alentours du site.

(3) Prévoir les bâtiments nécessaires avant les travaux d'installation dans le cas où le Projet consiste à fournir des équipements.

(4) Prendre en charge la totalité des dépenses et l'exécution rapide du déchargement, du dédouanement dans le port de débarquement et le transport terrestre des produits achetés dans le cadre de l'aide financière non-remboursable.

(5) Exonérer les ressortissants japonais de droits de douane, taxes intérieures et/ ou autres levées fiscales imposées dans le pays bénéficiaire eu égard à la fourniture des produits et des services spécifiés dans les contrats vérifiés.

(6) Accorder aux ressortissants japonais, dont les services pourraient être requis en relation avec la fourniture des produits et des services spécifiés dans les contrats vérifiés, toutes les facilités nécessaires pour leur entrée et leur séjour dans le pays bénéficiaire pour l'exécution des travaux.

(7) "Usage adéquat"

Le pays bénéficiaire est requis d'entretenir et d'utiliser les installations construites et les équipements achetés dans le cadre de l'aide financière non-remboursable de manière adéquate et efficace et de désigner le personnel nécessaire pour le fonctionnement et la maintenance ainsi que de prendre en charge toutes les dépenses autres que celles couvertes par l'aide financière non-remboursable,

(8) "Réexportation"

Les produits achetés dans le cadre de l'aide financière non-remboursable ne doivent pas être réexportés à partir du pays bénéficiaire.

(9) Arrangement bancaire (A/B)

a) Le gouvernement du pays bénéficiaire ou son représentant autorisé devra ouvrir un compte spécial à son nom dans une banque au Japon (désignée ci-après comme "la Banque"). Le gouvernement du Japon exécutera l'aide financière non-remboursable en procédant aux paiements en Yen japonais pour couvrir les obligations du gouvernement du pays bénéficiaire ou de son représentant autorisé conformément aux contrats vérifiés.

b) Les paiements seront effectués lorsque les demandes de paiement seront présentées par la Banque au gouvernement du Japon conformément à l'Autorisation de Paiement émise par le gouvernement du pays bénéficiaire ou de son représentant autorisé.

Annexe 3

Principaux travaux à exécuter par chaque gouvernement

N°	ELEMENTS	COUVERT PAR LE JAPON	COUVERT PAR LE BENIN
1	PRISE EN CHARGE DES COMMISSIONS SUIVANTES DE LA BANQUE DE CHANGE JAPONAISE POUR LES SERVICES BANCAIRES BASES SUR LES ARRANGEMENTS BANCAIRES (A/B)		
	1) COMMISSION DE NOTIFICATION DE L'AUTORISATION DE PAIEMENT (A/P)		●
	2) COMMISSION DE PAIEMENT		●
2	DECHARGEMENT ET DEDOUANEMENT AU PORT DE DEBARQUEMENT DU PAYS BENEFICIAIRE		
	1) TRANSPORT VERS LE PAYS BENEFICIAIRE PAR MER (AIR) DE PRODUIS ORIGINAIRES DU JAPON	●	
	2) EXONERATION D'IMPOTS ET DEDOUANEMENT DES PRODUITS AU PORT DE DEBARQUEMENT DU PAYS BENEFICIAIRE		●
	3) TRANSPORT A L'INTERIEUR DU PAYS ENTRE LE PORT DE DEBARQUEMENT ET LE SITE	●	●
3	ACCORDER AUX RESSORTISSANTS JAPONAIS DONT LES SERVICES POURRAIENT ETRE REQUIS DANS LE CADRE DE LA FOURNITURE DES PRODUITS OU DANS LE CADRE DU CONTRAT TOUTE L'AIDE NECESSAIRE POUR ASSURER LEUR ARRIVEE DANS LE PAYS BENEFICIAIRE ET Y PERMETTRE LEUR SEJOUR AFIN QU'ILS PUISSENT EXECUTER LESDITS SERVICES		●
4	EXONERER LES RESSORTISSANTS JAPONAIS DE DROITS DE DOUANE, TAXES INTERIEURES ET/OU AUTRES LEVEES FISCALES IMPOSEES DANS LE PAYS BENEFICIAIRE EU EGARD A LA FOURNITURE DES PRODUITS ET DES SERVICES SPECIFIES DANS LES CONTRATS VERIFIES		●
5	EXPLOITATION EN MAINTENANCE CORRECTE ET EFFICACE DES INSTALLATIONS CONSTRUITES ET DES EQUIPEMENTS FOURNIS DANS LE CARDE DE LA COOPERATION FINANCIERE NON-REMBOURSABLE		●
6	PRISE EN CHARGE DE TOUTES DEPENSES, AUTRES QUE CELLES COUVERTES PAR L'AIDE FINANCIERE NON-REMBOURSABLE, NECESSAIRES A LA CONSTRUCTION DES INSTALLATIONS ET AU TRANSPORT ET MONTAGE DES EQUIPEMENTS		●

[Appendix]-5 References

No.	References	Issued	Year
1	Budget Sectuer Santé	Ministry of Public Health	2001
2	Budget Sectuer Santé	Ministry of Public Health	2002
3	Politiques et Stratégies Nationales de Dévelopment du Sectuer de la Santé	Ministry of Public Health	1997
4	Politiques et Stratégies Nationales de Dévelopment du Sectuer de la Santé	Ministry of Public Health	2001
5	Plan Triennal d'Action pour le PEV 2000-2002	Ministry of Public Health	2000
6	Annuaire des Statistiques Sanitaires Annee 2000	Ministry of Public Health	2001
7	La Zone Sanitaire, stratégie de développment du systéme de Santé au Bénin	Ministry of Public Health	2000
8	Liste des Chaine de Froid et Motos	Ministry of Public Health	2000
9	Resume de la Presentation du Service Equipments et Maintenance	Ministry of Public Health	2001
10	Cooperation entre l'Union Eouropeenne et la Republique du Benin, Rapport Annuel	EU	2000
11	Evaluation des politiques et stratégies nationales de développement du secteur santé	EU	2001