# STUDY REPORT

## ON

# THE PROJECT FOR IMPROVEMENT OF

# CHILDREN \$ AND WOMEN \$ HEALTH

## AND MALARIA CONTROL

## (THE GRANT AID FOR CHILD WELFARE)

IN

## THE ISLAMIC REPUBLIC OF MAURITANA

MAY 2001

Japan International Cooperation Agency



### Preface

In response to a request from the Government of Republic of Mauritania, the Government of Japan decided to conduct a basic design study on the equipment for the project for Improvement of Children's and Women's Health and Malaria Control (The Grant Aid for Child Welfare) and entrusted the study to the Japan International Cooperation Agency (JICA)

The JICA sent a study team of the equipment project to Mauritania from September 18 to October 15, 2000.

The team held discussions with the officials concerned of the Government of Mauritania, and conducted a field study at the study area. After the team returned to Japan, further studies were made and as this result, 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 the 2 countries.

I wish to express my sincere appreciation to the officials concerned of the Government of Mauritania for their close cooperation extended to the teams.

May 2001

L Min

Kunihiko Saito President Japan International Cooperation Agency

## Location map







Mauritania

## Abbreviations

Abbreviations/ Acronym	English / French / German
BAD	Banque Africane de Developpmement
BID	Banque Islamique de Developpement
CE	Cooperation Espagnole
CFC	Chloro Fluoro Carbon
CJ	Cooperation Japonaise
СР	Center de Post
DAAF	Direction des Affaires Administratives et Financieres
DAS	Direction de l'Action Sociale
DGI	Direction de Gestion des Investissements
DPL	Direction de la Pharmacie et Laboratoires
DPS	Direction de la Protection Sanitaire
DRASS	Direction Regionale de l'Action Sanitare et Sociale
EPI	Expanded Programme on Immunization
EU	European Union
FAC	Cooperation Francaise
FENU	Fonds d'Equipment des Nations-Unies
GPHF	German Pharma Health Fund
<u>GTZ</u>	Deutche Gesellshaft für Technische Zusammenarbeit
IDA	International Development Association
<u>KFW</u>	Kreditanstalt für Wiederafbau
MSAS	Ministere de la Sante et des Affaires Sociales
NIDS	National Immunization Days
EPI	Programme Elargi de Vaccination
РНС	Primary Health Care
PNLP	Programme Nationales de Lutte Contre le Paludisme
PS	Post de Sante
UNICEF	United Nations Children's Fund
USB	Unit de Sante de Base
WHO/OMS	World Health Organization/Organization Mondiale de la Sante
Note ) Italics indicates Fre	ench, underlined letters are German.

Report of the Survey on Equipment Supply for the Grant Aid for Child Welfare

(The project for improvement of children's and

women's health and malaria control)

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#### Chapter 1 Background of the Project

- 1-1 Background of the Project
- (1) Present Status of the Health Sector

Table-1 and Table-2 below respectively show the general health indexes and the incidences of certain infectious diseases in recent years in Islamic Republic of Mauritania (hereinafter referred to as "Mauritania").

The mortality rate of children under five years of age and that of infants under 12 months are 183 and 120 (per 1,000 birth) respectively, which are higher than the average rates of other sub-Saharan countries. The inoculation rates are lower than the average rates of the sub-Saharan countries, except those among pregnant women against tuberculosis and tetanus. Vaccination rates of DPT (diphtheria, pertussis, and tetanus), polio, and measles are less than 30%. The annual death toll of children under five reaches 19,000, with acute respiratory infection, diarrhea, and malaria being the major causes. Although accurate epidemiological data is not available, the incidences of polio, tetanus, and measles, which can be prevented by proper immunization, are still high. While Mauritania's maternity mortality rate of 550 women per 100,000 live births seems to be at the same level of those of its neighboring countries, Mauritania's own statistics show that the actual figure could be as high as 880 in 1999. Difficult labor, puerperal infection<sup>1</sup>, eclampsia<sup>2</sup>, and hemorrhage are major causes of maternal deaths. About 60% of pregnant women suffer from nutritional anemia (iron and folic acid deficiency), which makes the mothers and malnourished newborns susceptible to malaria.

					(	,				
Country/	Mortality	Mortality rate	Annual death	Maternity Ratio of people received full-course v				course vacci	ccination (%)	
region	children under 5 (per	infants under 12	under 5 (x1000)	(per 100,000		1-у	ear old		Maternal	
	1,000  births	mos. (per 1.000		births)	TB	DPT	Polio	Measles	tetanus	
		births)								
Mauritania	183	120	19	550	69	28	28	20	63	
				(880)						
Sub-Sahar	173	107			63	48	48	48	37	
an average										

Table-1: General Health Indexes (1998)

Source: The State of the World's Children 2000, UNICEF

Response letter of the Mauritanian government in 1999.

According to UNICEF's 1999 report, the figures were 560, 580, 600, 230, 500 for the neighboring Senegal, Cote d'Ivoire, Benin, and Morocco respectively.

 $^2$  Toxemia of late pregnancy, characterized by hypertensive encephalopathic seizures, often causing damages in the kidney, liver, glandula pituitaria, adrenal, and placenta.

<sup>&</sup>lt;sup>1</sup> Bacterial infection usually starts in the vagina during the period in which anatomical and functional changes in the whole body and the genital caused by childbirth are restored to the non-pregnant state (postpartum).

Malaria is the most fatal infectious disease and one of the most serious health threats in the African continent, taking lives of two million people in the region every year. The incidence of malaria within Mauritania is particularly high in the Senegal River basin, which could be attributed to the overall increase in rainfall in recent years, as well as to the expansion of irrigated farmland in the region. There were about 40,000 cases of malaria registered in 1991, since when the figure began rising and exceeded 300,000 in 1999 when the region was hit by heavy rain. According to the statistics compiled by the German Technological Agency (GTZ) for a 4-year period starting in 1992, the average death rate of malaria accounted for a little less than 1% of the total number of hospitalized patients in grave condition. Backed by WHO, UNICEF, GTZ, and other aid organizations, the Mauritanian government has launched in 1997 a malaria-control campaign to educate people on the impregnation of mosquito nets with insecticide, establish treatment facilities, introduce anti-malarial drugs, and conduct other activities. However, truly effective prevention measures have yet to be implemented. In Boghé of Brakna Province, 20 to 30% of patients who visited the district's health center between January and August 2000, were suspected to have been infected with malaria.

As the situation is such, and the country still faces so many problems in the sectors of basic health/medicine and maternal-and-child healthcare that improvement of health/medical services and implementation of malaria control measures are urgently needed.

Table-2. Incidence Rates of Major Infectious Diseases										
Name of disease	1995	1996	1997	1998	1999					
Polio (paralysis)	5	9	-	9	13					
Tetanus	4	6	-	11	8					
Measles	7,024	269	296	1,348	4,225					
Malaria	214,438	182,134	155,862	199,373	332,185					

Table-2: Incidence Rates of Major Infectious Diseases

Source: Response letter of the Mongolian government, the aggregates of all age groups

#### (2) Problems and their causes

The obstacles to the implementation of the Expanded Program for Immunization (EPI) in Mauritania are created by a number of factors. First of all, there is a geographical disadvantage; providing vaccination for Mauritanian people living in scattered areas over the vast country is rather difficult. And there is lack and inadequacy of cold chain equipment, medical facilities and personnel, budget for EPI activities, education and training for EPI personnel, and awareness of or education for the general public. Some people attribute the low routine vaccination rate to the difficult access to the facilities where vaccines are given, but they also point out that the underdeveloped vaccine supply system and the inadequate maintenance and control of the cold chain equipment are also to blame (Table-3). Although WHO, UNICEF, and other international organizations are assisting the EPI activities, the budget is still too limited to supply and meet the entire demand for cold chain equipment.

	Gas supply stoppage	Power failure	Refrigerator breakage	Lack of injection devices	Lack of vaccines	Other			
No. of vaccination facilities	13	44	2	20	15	10			
Facilities encountering problems (%)	7.6	25.6	1.2	11.6	8.7	5.8			

Table-3: Problems at Routine Vaccination Facilities\*

Source : Revue du Programme Elargi de Vaccination, Evaluation de la Chaine de Froid, 1997, OMS (partially modified)

\*: Problems encountered by 92 facilities (53.5%) of 172 routine vaccination facilities in the past six months.

For the control of malaria, the 3-Year Malaria Control Plan 2000 – 2002 commenced with the support of other countries. A mosquito net treatment campaign was also launched, under which facilities where nets are impregnated with insecticide were established in the target regions. However, this campaign has yet to be proven effective while the percentage of actually treated mosquito nets remains low. With the aim of quickly eradicating malaria, the Mauritanian government is searching for ways to efficiently distribute insecticide-treated mosquito nets to each household so that the disease can be controlled systematically. However, the Mauritanian government has little budget to afford necessary materials and equipment, and it is difficult for various aid organizations to allocate funds for the purchase of mosquito nets and insecticides.

## 1-2 Contents of Request

Under the circumstances described above, the government of Mauritania submitted a request to the government of Japan to extend grant aid for the EPI activities and Malaria Control Project for the enhancement of maternal-and-child health.

The initial request for the EPI included the provision of vaccines, injection devices, and vitamins, but they were excluded from the request as the provision of such materials would contradict the Mauritanian government's pledge before international aid organizations to exercise self-help in the EPI activities. Cold chain equipment and vehicles that were in urgent need remained in the request. Refrigerators and freezers needed to store and transport vaccines will be used as replacements for broken items and to support the expansion of the country's cold chain system.

As for the malaria control program, mosquito nets, insecticides to treat mosquito nets with,

gloves and other accessories, and vehicles to transport these materials and the personnel to monitor the progress of the program to the target regions were requested.

Chapter 2 Contents of the Project

## 2-1 Objectives of the Project

This Project consists of Expanded Program for Immunization (EPI) and the Malaria Control Program.

As for EPI, the Mauritanian government, pursuant to its 'Health/Social Project Basic Plan 1998-2000' and 'Health Sector Improvement/Development Plan,' has set a goal to raise the current immunization rate of around 30% to over 80%, as well as the rate of infants who complete the required course of inoculation before age one to 75%, by 2002. To achieve this goal, the government is planning and implementing the health/medical infrastructure development program so that more than 80% of residents in each area can receive immunization at the facility situated within five kilometers from their homes.

For the control of malaria, the Malaria Control 3-Year Plan 2000-2002 has been developed and launched with the helps of WHO, UNICEF, GTZ, and IDA. Ten Provinces (excluding Tiris-Zemmour and Adrar) were designated as target regions, to which 30,000 mosquito nets are scheduled to be distributed over a three-year period as part of the country's malaria control program. The Mauritanian government, in hope of drastically reducing morbidity and mortality of malaria, is looking for ways to distribute and spread the use of insecticide-treated mosquito nets.

However, neither the Mauritanian government nor international aid organizations have the budget to support this endeavor. Thus, this Project intends to support the sustenance and expansion of the EPI activities in Mauritania by donating cold chain equipment and vehicles and, at the same time, aims to contribute to the strengthening of maternal-and-child healthcare and the welfare of children by providing mosquito nets, insecticides to treat the nets with, and related vehicles under Japan's grant aid system in order to facilitate the reduction of malaria morbidity and mortality in Mauritania.

## 2-2 Basic Concept of the Project

## (1) Expanded Program for Immunization (EPI)

WHO, UNICEF, EU, and other aid organizations are assisting Mauritania's EPI activities by donating equipment and vaccines. However, in order to improve the vaccination rate, it is essential to maintain and expand the cold chain equipment needed for storing and distributing

vaccines. In 1999, WHO began giving training seminars on the maintenance and repair of cold chain equipment to the personnel who are in charge of maintaining and controlling medical equipment in each Province in an effort to provide technical assistance to solve problems associated with the maintenance of cold chain. In selecting equipment for this Project, we will try to choose items that can run on gas in addition to electricity and that meet the WHO/UNICEF standards wherever possible while taking into account the WHO's 1997 survey results (Table-5) and recommendation, contents of the Mauritanian government's request, and the fact that only the most populated areas in each region (about 20%) have access to electricity.

#### (2) Malaria Control

As for mosquito nets to ward off malaria carrying vectors, we will set the goal to decrease the incidence of malaria infection and resulting deaths among infants and pregnant women and will choose the net size that will be enough to cover a mother and a child together. Eight Provinces having high infection rates will be selected as target regions, and the necessary quantity of nets to be distributed to all the households in the target regions will be calculated. Along with mosquito nets, insecticides, which WHO recommends as safe and effective against malaria, will be provided in individual packets, each containing a required dose.

The capabilities of the Mauritanian agencies in charge of the EPI and Malaria Control programs to carry out the project seem inadequate in terms of personnel, budget, planning, execution, monitoring, and evaluation. Therefore, we will consider the possibilities of extending technical assistance under the framework of Japan's international cooperation scheme, or providing the equipment through or working in conjunction with WHO and UNICEF, both of which have already been deeply involved in the EPI and Malaria Control programs in Mauritania.

## 2-3 Basic Design

### 2-3-1 Design Policy

#### (1) Specifications of Equipment to be Procured

## 1) Expanded Program for Immunization ( EPI )

In deciding the specifications of cold chain equipment, we referred to WHO's cold chain equipment study conducted in 1997. According to the study, in order to complete the EPI's immunization schedule, refrigerator/freezer vaccine-storage capacities of 15.12-ml/20.12-ml are required per person subject to immunization. Each facility will be immunizing 568

infants under 12 months old on the average. Assuming that vaccines will be used and replenished bimonthly, a refrigerator capacity of 4.3 liters and a freezer capacity of 1.9 liters will be needed. Considering that children under five and pregnant women will also be subject to immunization, the equipment specifications should have sufficient extra storage capacities.

#### **Small Refrigerators**

We will procure refrigerators that can store a required volume of vaccines and have a function to freeze icepacks for cooling vaccines carries and cold boxes that are used to transport vaccines to their final destinations. These refrigerators will be provided mainly for the health posts that have broken refrigerators and are in urgent need of replacements. Taking into account the limited access to electric power supply, the refrigerators should be able to run either on electricity or LP gas and have a refrigeration capacity of 10 or more liters each (with an icepack freezing capacity of one or more liters). These specifications will comply with the standards of WHO/UNICEF.

#### **Ice-lined Refrigerators**

Health posts and other facilities that service remote places or take charge of broad areas need extra freezer space in addition to their existing freezers and the freezing compartments of the refrigerators to be provided under this Project. Thus, for those facilities additional ice-lined refrigerators will be provided, which can be run on LP gas in addition to electricity with a refrigeration capacity of 20 liters or more and comply with WHO/UNICEF standards.

#### **Small Freezers**

Small freezers are used at basic health units to make icepacks to be included in vaccine carriers and cold boxes for transferring small volumes of vaccines. These small freezers will run either electricity or LP gas, have a freezing capacity of eight liters or more, and comply with WHO/UNICEF standards.

#### Large Freezers

Large freezers are also for making icepacks, but they can be used as refrigerators to store large volumes of vaccines.

Large freezers to store 150 or more liters of vaccines or to make icepacks will be provided primarily for health centers. This type of freezer complying with the WHO/UNICEF

standards runs on electricity only.

### Vehicles

Four-wheel-drive vehicles that travel well on deserts and unpaved roads will be selected. The engine displacement will be two or more litters, and the vehicles shall run on light oil for easy maintenance. Pickup-type, single-cabin vehicles for transferring vaccines and cold chain appliances for repair, as well as wagon-tyEPIehicles for transporting personnel for EPI surveillance and monitoring, will be provided for EPI.

## 2) Malaria Control

## Mosquito Nets

Mosquito nets for two persons to protect a mother and an infant sleeping together will be procured. The size of each net will be at least 180-mm long, 150-mm wide, and 130-mm. They shall be made of polyester for durability.

## Insecticide

We will use pyrethroid insecticide that WHO regards as effective against mosquitoes, easily decomposable, and having low toxicity to the mammals. We will choose one from the five kinds of pyrethroid insecticides listed below whose effects last at least six months after treatment. The chemical may take any dosage form. We will calculate the maximum dose recommended to control malaria for the square measure of each mosquito net, and provide the insecticide in individual packets of single dose. Rubber gloves for handling insecticide, as well as water gauges for diluting insecticide, will be attached.

- \* Lambda-cyhalothrin
- \* Etofenprox
- \* Deltamethrin
- \* Cyfluthrin
- \* Alpha-cypermethrin

## Vehicles

Four-wheel-drive vehicles that travel well on deserts and unpaved roads will be selected. The engine displacement will be two or more litters, and the vehicles shall run on light oil for easy maintenance. Pickup-type, single-cabin vehicles for transporting mosquito nets and insecticide, as well as wagon-tyEPIehicles for transporting personnel for activities monitoring, will be provided for PNLP.

### (2) Suppliers

### 1) Expanded Program for Immunization (EPI)

Since the cold chain equipment to be procured under this Project has to meet WHO/UNICEF standards, such appliances will probably be sourced from a third country. The vehicles will be procured locally, as there is a car dealer in Nouakchott, Mauritania that sells automobiles that meet the above-mentioned requirements and can supply spare parts and provide repair services.

## 2) Malaria Control

Mosquito nets and insecticide will be sourced from a third country, as there is virtually no company in Japan that manufactures these items in large volumes. Vehicles will be procured from a local source for the same reason mentioned above.

#### 2-3-2 Basic Plan

#### (1) Overall Plan

## 1) Expanded Program for Immunization (EPI)

Under this Project, cold chain appliances will be provided for the health centers and health posts (including the pediatric department of National Central Hospital) in 13 Provinces. Specific appliances are chosen based on the information provided by the Mauritanian government regarding the number of appliances and their specifications at each provincial facility, as well as WHO's equipment status survey and recommendations (1997) and our site survey. Although EPI currently owns two vehicles, additional vehicles will be provided, as EPI is expected to play a more active role in improving the efficiency of the EPI activities and handling emergency situations. Also, it was confirmed that additional budget would be appropriated to EPI for vehicle maintenance and control. Table-4 below shows the number of medical facilities and the number of people subject to immunization in each Province of Mauritania.

Province	Provincial/n ational hospitals	Provincial Health/Soci al Activities Bureau (DRASS)	Health centers	Health posts	Population within 5-km radius	Infants under 12 months	Children under 5*	Pregnant women
Nouakchott	4	1	11	14	603,484	30,392	111,644	35,710
Hodh El Chargui	1	1	6	43	128,738	5,150	22,816	6,051
Hodh El Gharbi		1	4	30	94,184	3,767	17,424	4,427
	1							
Assaba	1	1	5	37	14,851	594	2,747	698
Gorgol	1	1	4	21	102,840	4,114	19,025	4,833
Brakna	1	1	5	32	114,096	4,564	21,107	5,363
Traza	1	1	6	38	193,831	7,753	35,858	9,110
Adrar	1	1	4	13	75,725	3,029	14,009	3,559
Dakhlet Nouadhibo	1	1	1	5	107,314	4,293	19,853	5,044
Tagant	1	1	3	7	29,649	1,186	5,485	1,394
Guidimakha	1	1	2	20	58,707	2,348	10,860	2,759
Tiris-Zemmour	1	1	3	2	46,879	1,875	8,672	2,203
Inchiri	1	1	1	2	13,075	523	2,418	615
Total	16	13	55	264	1,583,373	69,578	291,918	81,866

Table-4: Nos. of Medical Facilities and Immunization Targets in each Province (1999)

Source: Numbers of health centers and posts were calculated based on the equipment request list submitted by the Mauritanian government.

Target population of immunization refers to the response letter of the Mauritanian government. \*: Population within a 5-km radius multiplied by national average ratio of children under five (18.50%).

### 2) Malaria Control

While the Mauritanian government's 3-year malaria control plan designates ten Provinces as target regions, this Project considers providing mosquito nets and insecticides for eight Provinces that have particularly high incidence of malaria. Although the malaria incidence of Adrar Province in 1999 was notably high, the Province was excluded from the Project, as the high incidence was temporarily cased by heavy rain. The 8 Provinces subject to the project are: H. E. Chargui, H. E. Gharbi, Assaba, Gorgol, Brakna, Traza, Tagant, and Guidimakha (highlighted in Table-5 below). Table-6 shows the number of malaria cases by age group.

Province	1995	1996	1997	1998		1999		
					No. of	Population	Morbidity	
					cases		(%)	
Nouakchott	23,636	16,422	14,399	20,682	34,856	697,542	5,0	
Hodh El Chargui	35,525	32,389	19,895	24,427	45,623	283,902	16.1	
Hodh El Gharbi	29,678	30,474	21,178	26,422	39,212	210,832	18.6	
Assaba	30,258	32,839	29,355	35,785	38,458	217,280	17.7	
Gorgol	22,258	18,644	20,281	24,623	34,097	227,235	15.0	
Brakna	32,526	30,221	17,875	22,254	35,764	243,393	14.7	
Traza	18,317	4,342	13,836	21,673	47,986	212,588	22.6	
Adrar	1,321	486	429	433	11,698	73,868	15.8	
Dakhlet Nouadhibo	465	488	603	642	1,252	111,785	1.1	
Tagant	6,618	3,681	2,728	2,751	7,845	77,949	10.0	
Guidimakha	13,426	11,732	14,986	19,389	33,975	153,775	22.1	
Tiris-Zemmour	206	213	88	91	856	46,879	1.8	
Inchiri	204	203	209	201	563	13,410	4.2	
Total of 8 target	188,606	164,322	140,134	177,324	282,960	1,626,954	17.4	
Provinces								

Table-5: Incidences of Malaria in Recent Years

Source: Response Letter of the Mauritanian Government

			-	5 0	1
Year	Under 1	1 - 4	5 – 14	Over 15	Total
1995	9,797 (4.5%)	26,940 (12.5%)	53,218 (24.8%)	124,483 (58.2%)	214,438 (100%)
1996	ND	ND	ND	ND	181,204
1997	ND	ND	ND	ND	189,571
1998		ND	ND	ND	178,850

Table-6: No. of Malaria	Cases and	Morbidity	Rate by A	Age Group
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Source: Plan Triennal de Lutte Contre le Paludisme 2000-2002, Decembre 1999 ND: Data not available

Currently, no vehicles are in place for the malaria control program. As we determined that vehicles are necessary to transport equipment and personnel, as well as for monitoring activities, and confirmed that a budget was allocated for the vehicle maintenance, we decided to provide vehicles for the malaria control program as well.

## (2) Equipment Plan

- 1) Specifications and Use of Equipment
- a. Expanded Program for Immunization ( EPI )

Table-7 below shows the specifications and use of articles to be procured under this project.

	These we experimentations and eve of Equipment to be Freewood								
No.	Equipment	Specifications	Qty.	Use					
1	Small refrigerator	Vaccine storage capacity: 10 liters or more Icepack freezing capacity: 1 liter or more Electric/gas type	40	For storing vaccines					
2	Ice-lined refrigerator	Vaccine storage capacity: 20 liters or more Electric/gas type	83	For storing vaccines					
3	Small freezer	Icepack freezing capacity: 8 liters or more Electric/gas type	36	For freezing icepacks					
4	Large freezer	Icepack freezing capacity: 150 liters or more Electric type	52	For freezing icepacks or storing vaccines					
5	Pickup tyEPIehicle	4WD, single cabin, diesel engine displacement of 2 liters or more	1	For transporting vaccines, equipment, etc.					
6	Wagon tyEPIehicle	4WD, diesel engine displacement of 2 liters or more	1	For EPI surveillance and monitoring					

Table-7: Specifications and Use of Equipment to be Procured

Based on discussions with the Ministry of Health and Social Projects EPI.

Cylinders and regulators for LP gas are excluded from the procurement list, as they are obtainable by the Mauritanian side.

## b. Malaria Control

Table-8 below shows the specifications and use of articles to be procured under this project.

No.	Item	Specification	Qty.	Use
1	Mosquito net	For 2 persons, 180L x 150H x 130W or	220,000	For warding off malaria
	_	larger	nets	vector mosquitoes
		Made of polyester		-
		Pyrethroid insecticide, individually	220,000	For impregnating
2	Insecticide	packed for single dose to treat one	sets	mosquito nets with
		mosquito net, attached with rubber gloves		insecticide
		and measuring devices.		
		Effect of insecticide lasts 6 months or		
		longer.		
3	Pickup-tyEPIeh	4WD, single cabin, diesel engine	1	For transporting mosquito
	icle	displacement of 2 liters or more		nets and insecticide
4	Wagon-tyEPIeh	4WD, diesel engine displacement of 2	1	For transporting personnel
	icle	liters or more		and monitoring

Table-8: Specifications and Use of Equipment to be Procured

## 2) Calculation Basis of Quantity to be Procured

## a. Expanded Program for Immunization ( EPI )

The quantity of each item to be procured was determined based on the number of appliances or materials requested for each provincial facility by the Mauritanian government, WHO' equipment survey results and recommendations (1997), and the recent site survey. Of the requested items, all the broken ones will be replaced whereas those that are confirmed to be already in place during the site survey, as well as redundantly requested ones for the same facility, will be excluded. Table-9 below lists the quantity of each article to be procured under this Project.

Province No. of appliances currently owned <sup>2</sup>		pliances owned *	Small refrigerators to replace broken	Equipment newly installed due to the establishment of new facilities or expansion of existing facilities			
	Operative	Broken	ones	Ice-lined refrigerator	Small freezer	Large freezer	
Nouakchott	20	3	7 7	0 0	5 5	8 8	
Hodh El Chargui	17	6	44	15 14	3 3	33	
Hodh El Gharbi	16	2	22	7 7	4	6 6	
Assaba	14	4	33	10 9	2 2	3	
Gorgol	5	6	0 0	9 9	1	3	
Brakna	14	8	1 0	15 9	4	5	
Traza	24	8	11 11	15 15	4	7 7	
Adrar	2	2	3	7	1	5 5	
Dakhlet Nouadhibo	6#	1#	1	4	4	0 0	
Tagant	10	3	1	0 0	3	4	
Guidimakha	20	7	7 7	8 8	1 1	33	
Tiris-Zemmour	4	2	0 0	2 2	3 3	6 6	
Inchiri	1	0	1	0 0	2 2	0 0	
Total	153	52	40 <b>40</b>	92 <b>83</b>	37 <b>36</b>	53 <b>52</b>	

### Table-9: Quantity of Equipment to be Procured

\* : Revue du Programme Elargi de Vaccination Evaluation de la Chaine de Froid, 1997, OMS

#: Equipent Request Document from EPI (2000)

Upper figure: requested quantity

Lower figure: quantity to be procured after examination (highlighted parts indicate a decrease from the requested quantity.)

Two vehicles will be procured as requested because they are crucial for the successful implementation of this Project, and because the budget for vehicle maintenance has already been allocated as shown in Table-20.

#### b. Malaria Control

The quantity of mosquito nets needed for each Province was calculated based on the estimated population of each Province in 2001, an average of five members per household, and 35% mosquito net diffusion rate as confirmed by a hearing survey (Table-10).

Province Estimated		No. of	No. of	Children	Pregnant	
	population	households	mosquito	under five	women	
	(2001)		nets required			
Hodh El	300,480	60,000	39,000	55,588	14,242	
Chargui						
Hodh El	223,107	45,000	29,000	41,274	10,575	
Gharbi						
Assaba	229,482	46,000	29,000	42,454	10,877	
Gorgol	239,089	48,000	31,000	44,231	11,332	
Brakna	257,013	52,000	33,000	47,547	12,182	
Traza	217,320	44,000	28,000	40,204	10,300	
Tagant	81,087	16,000	10,000	15,001	3,843	
Guidimakha	163,156	33,000	21,000	30,183	7,733	
Total	1,710,734	344,000	220,000	316,482	81,084	
				(205,713)*	(52,704)*	

Table-10: Quantity of Equipment to be Procured

Notes: No. of mosquito nets was calculated based on five persons per household and the diffusion rate of 35%.

The numbers of children under five and pregnant women were derived by multiplying the estimated population by the national average ratios of 18.50% and 4.74% respectively.

\*: Population in the case of 65% non-diffusion rate of mosquito nets.

Two vehicles will be procured as requested because they are crucial for the successful implementation of this project, and because the budget for vehicle maintenance has already been allocated.

#### (3) Equipment Distribution Plan

#### 1) Expanded Program for Immunization (EPI)

Under this Project, a total of 221 cold chain appliances will be procured and distributed to the health centers and health posts in each Province.

Vehicles will be stored at EPI in Nouackchott City.

## 2) Malaria Control

As shown in Table-10, the necessary quantities of mosquito nets and insecticides will be distributed to DRASS located in the capital of each of the eight Provinces. After that, they will be delivered to the insecticide treatment/mosquito distribution centers that have already been established (Table-11).

Province	No. of insecticide-treated	District	Insecticide treatment/dis
	mosquito nets (nets per Province)		tribution centers
Hodh El Chargui	39,000	5	11
Hodh El Gharbi	29,000	4	37
Assaba	29,000	4	11
Gorgol	31,000	4	13
Brakna	33,000	5	26
Traza	28,000	6	11
Tagant	10,000	3	6
Guidimakha	21,000	2	15
Total	220.000	33	130

Table-11: Mosquito Net/Insecticide Distribution Centers

Note: The number of insecticide treatment/distribution centers in each district refers to the information provided by the Mauritanian government.

## Chapter 3 Implementation Plan

3-1 Implementation Plan

## 3-1-1 Implementation Plan

Budgetary year: Single year (FY 2000)

Entire period (from E/N to delivery): 12 months

From E/N to contractor agreement: 5 months

Delivery date (from contractor agreement to delivery): 7 months

	Month	1	2	3	4	5	6	7	8	9	10	11	12
	Exchange of notes												
	Implementation Design (approx. 5.0 months)		Final co	Prepara Approv	ion of p tion of t al of doo Explana and del	an continuender de cuments ation at ivery of	ents ocument site drawing Tenderi Supplie	s ing and t r contra	tender e	valuatio	n		
Entire Period	Procurement and management (approx. 7.0 months)		Discuss		th suppli Man of ea Pre-shij	er ufacturin quipmer pment ir	ng and p nt ispection	rocurem 1 Trans	ent portatio Inspect	n of equ ion and 1	ipment Delivery		
			Work in	n Mauri	tania	Work in	n Japan		Work in	n the thi	rd count	ry	

### 3-1-2 Obligations of Recipient Country

### (1) Expanded Program for Immunization (EPI)

#### 1) Cold Chain Appliances

These articles can be transported and installed by a small number of people, and WHO has already trained Mauritanian personnel in their proper operation. Therefore, the Japanese side will deliver the appliances to DRASS located in the capital of each of the 13 Provinces. The Mauritanian side will take charge of transporting them to and installing them at the health centers and health posts. It was confirmed that the Mauritanian side would purchase gas cylinders and regulators where LP gas would beused.

### 2) Vehicles

The Japanese side will deliver the vehicles to the central warehouse of the Ministry of Health and Social Projects situated in Nouackchott City.

#### (2) Malaria Control

1) Mosquito nets and insecticide

The Japanese side will deliver these materials to the central warehouse of the Ministry of Health and Social Projects situated in Nouackchott City. From there the Mauritanian side will transport them to their final destinations in the eight target provinces.

2) Vehicles

The Japanese side will deliver the vehicles to the central warehouse of the Ministry of Health and Social Projects situated in Nouackchott City.

#### 3-2 Operation and Maintenance Plan

EPI's Logistics Cold Chain Office, which will be controlling and maintaining the cold chain equipment to be procured under the EPI portion of this Project, has been conducting training and educational seminars under the technical guidance of WHO for the personnel in charge of

controlling and maintaining medical equipment in each Province since 1999. WHO's 1997 status survey on cold chain equipment, as well as our site survey, observed in some cases that the refrigerators and freezers were not used properly, and maintenance and temperature control procedures were not strictly enforced. Inadequate maintenance and control could lead to faulty operation of cold chain appliances, as well as deterioration of vaccines. It seems that EPI is not adequately staffed or funded to educate the equipment personnel of each medical facility or to give guidance or instructions through DRASS. Therefore, the procurement and provision of these appliances need to be done in cooperation with WHO/UNICEF.

Materials to be procured for malaria control will temporarily stored at the central warehouse of the Ministry of Health and Social Projects. Our site survey observed that certain problems existed in the storage and control at the warehouse; medical equipment and supplies were disorderly kept and inventory control was not diligently exercised. However, since a personnel reshuffle in October 2000, new improvement measures, such as clear identification of stored items and computerized inventory control, have been taken place under a new system. In accommodating the equipment and materials to be provided under this Project, the PNLP personnel need to check the status and future plan of the storage and control at the central warehouse so that the equipment and materials will be transported and stored properly in an organized manner.

## Chapter 4 Project Evaluation and Recommendation

## 4-1 Project Effect

## (1) Expanded Program for Immunization (EPI)

As a direct effect, provision of cold chain equipment will ensure the maintenance and expansion of the present cold chain system thereby guaranteeing the immunization for about 70,000 infants under 12 months (or about 300,000 children under five years old) plus around 80,000 pregnant women living within a 5-kilometer radius of each medical facility. As for indirect effects, this Project will support the sustenance of EPI, through which such targets as the increase of immunization rate to over 80%, eradication of polio, and the decrease of measles incidence by 90% by 2002 could be achieved, and a significant decrease in the country's infant mortality rate is also expected.

## (2) Malaria Control

Provision of 220,000 sets of mosquito nets, insecticide, and accessories will mean that every household in the eight target Provinces will have one or more mosquito nets (assuming that the current diffusion rate is 35%). If two persons share a net, 440,000 people will enjoy the direct benefits of this Project. 220,000 nets will exceed the estimated number of infants who are presently not using mosquito nets (210,000) and will be four times more the number of pregnant women (approx. 53,000). Therefore, these nets are expected to provide ample protection for pregnant women, as well as mothers and babies, against malaria (See Table-10).

More specifically, assuming that the malaria morbidity rate of children under five is 17%, approximately 350,000 children will escape from malaria infection, which still means more than 10% of the number of malaria incidence in 1999 (about 280,000 cases). However, as the infection among pregnant and postpartum women is also expected to decrease, the actual malaria-related deaths will decrease at a much faster pace than the Mauritanian government's target of 10% each year from 2000, and the threat of malaria is expected to be dramatically reduced. Although epidemiological data that shows the direct correlation between malaria infection and the mortality rates of infants and pregnant women is not available, this Project is also expected to lower these figures thereby contributing greatly to the health and welfare of mothers and children.

If the counterpart funds are sufficiently appropriated, this Project will develop into a sustainable one, reducing the malaria morbidity of adults by almost 60%. By reducing the social and economic loss by reducing the Mauritanian government's financial burden on malaria control, enhancing the health of Mauritanian families, and improving the nation's productivity, this Project will likely bring substantial economic effects to the country.

## 4-2 Recommendation

1) Expanded Program for Immunization ( EPI )

EPI activities began in Mauritania in 1977 and have been carried out with the support of various international organizations and donor countries since then. Even today, vaccines are supplied to Mauritania through the assistance of such donors, and the maintenance of the cold chain system and associated education and training are done mostly under the technical support of WHO/UNICEF. Mauritania's EPI activities, including the maintenance of cold chain, rely on these aid organizations and probably cannot be carried out independently given the country's limited personnel and financial resources. Therefore, provision of cold chain equipment under this project will inevitably need cooperation and coordination with other donors.

This project will need technical assistance for the use and maintenance of cold chain equipment, installation at the site, and monitoring and evaluation of cold chain system operation, which should preferably be provided through the cooperation and coordination with other donors.

## 2) Malaria Control

The malaria control program is also being carried out under the technical assistance of WHO, UNICEF and GTZ whose support is also essential for the successful implementation of this Project. Since massive amounts of materials will be distributed, cooperation and coordination with other donors will be essential for complementing the existing distribution and administrative capacities of the implementing agency. Although the Mauritanian government has not officially requested technical assistance for this project, the personnel in charge of this project are recognizing the need of Japan's technical assistance.

As explained above, this Project is expected to bring substantial benefits. It will widely contribute to the improvement of health and medical services for the Mauritanian people, and thus its necessity is apparent. However, the implementing agency's ability to carry out this project remains questionable. Unless the technical, financial, personnel, and budgetary insufficiencies are solved or complemented, this grant aid Project will not likely take the intended effects. Therefore, to ensure greater success for this Project, it should be implemented as multilateral aid, involving other organizations, such as UNICEF that already has a base in Mauritania.

- $1 \ . \ Appendix \ \ 1 \ Member List of the Survey Team$
- 2 . Appendix 2 Survey Schedule
- ${\bf 3}$  . Appendix  ${\bf 3}$  List of Party Concerned in the Recipient Country
- 4 . Appendix 4 Minutes of Discussion

Appendix 1 Member List of the Survey Team

Project Manager	KUROKAWA Tsuneo
	Director
	Senegal Office
	JAPAN INTERNATIONAL COOPERATAION AGENCY
Equipment / Procurement planner I	NISHIGAKI Toshiaki
(Equipment Plan)	Grant Aid Management Department
	JAPAN INTERNATIONAL COOPERATION SYSTEM
Equipment / Procurement planner I	KASHIWAZAKI Kenji
(Procurement Plan)	Grant Aid Management Department
	JAPAN INTERNATIONAL COOPERATION SYSTEM
Interpreter	MIYAKE Shigehisa
	Coordination Department
	JAPAN INTERNATIONAL COOPERATION CENTER

## Appendix - 2 Survey Schedule

No.	Date	Day of the week	Activities	Where to stay
1	September 18 2000	Mon.	Tokyo 12:05(NH205) - Paris 16:30	Paris
2	September 19	Tue.	Paris 16: 30 (AF718) - Dakar 20: 25	Dakar
3	September 20	Wed.	8: 30 Courtesy call to JICA senegal Office and discussion	Nouakchott
			11:00 Courtesy call to Embassy of Japan and discussion	
			Dakar 18:00 (DS353) - Nouakchott 19:30	
			Meeting with Ministry of Economy and Development	
4	September 21	Thu.	9:00 Discussion with Ministry of Health and Social Affaires (MSAS)	Nouakchott
5	September 22	Fri.	Market Study	Nouakchott
6	September 23	Sat.	9:00 Discussion with MSAS	Nouakchott
			10:00 Discussion with WHO	
7	September 24	Sun.	9:00 Discussion with EU	Nouakchott
			10:00 Discussion with GTZ	
			11:00 Visit to National Health Center	
8	September 25	Mon.	9:00 Discussion with UNICEF	Nouakchott
			11:00 Discussion with MSAS (EPI)	
			13:00 Visit and Survey of private enterprises	
			16:00 Visit to the Ecole Polytechnique	
9	September 26	Tue.	9:00 Site Survey of Health Center and Health Post in Nouakchott	Nouakchott
			Local residents survey	
10	September 27	Wed.	7: 30 Site survey to DRASS in Rosso, Traza Province	Nouakchott
			Meeting with NGO	
11	September 28	Thu.	9:00 Discussion with MSAS (PNLP)	Nouakchott
12	September 29	Fri.	10:00 Discussion with MSAS (PNLP)	Nouakchott
13	September 30	Sat.	9:00 Discussion with MSAS (PNLP)	Nouakchott
14	October 1	Sun.	9:00 Discussion with MSAS (EPI)	Nouakchott
			12:00 Visit to NGO	
			18:00 Discussion with MSAS (EPI)	
15	October 2	Mon.	8: 30 Discussion with MSAS (EPI)	Nouakchott
			9:00 Discussion with MSAS (PNLP)	
			Arrival of Mr. KUROKAWA	
16	October 3	Tue.	10:00 Coutesy Call to Minister of MSAS	Nouakchott
			10: 30 Coutesy Call to Minister of Economy and Development	
			11:00 Discussion with MSAS	
			18:30 Internal Meeting	

17	October 4	Wed.	9:00 Discussion with MSAS	Nouakchott
			12:00 Signature on Minutes of Meeting	
18	October 5	Thu.	Departure of Mr. KUROKAWA to Senegal	
			8:00 Site survey in Nouadbibou Province	Nouadbibou Province
19	October 6	Fri.	Site Survey, Move to Brakna Province	Aleg
				Brakna Province
20	October 7	Sat.	8:30 Site Survey of DRASS in Brakna Province, Aleg Health Center,	Boghé
			USB ( 2 sites )	Brakna Province
21	October 8	Sun.	9: 00 Site Survey of Boghé Health Center in Brakna Province,	Nouakchott
			Women's group	
			Health Post (2 sites), El Manhar Health Center	
22	October 9	Mon.	10:00 Discussion with MSAS (PNLP)	Nouakchott
			11: 30 Discussion with MSAS (EPI)	
			16 : 00 Discussion with WHO	
23	October 10	Tue.	9: 30 Discussion with MSAS (EPI,PNLP)	Nouakchott
			14:00 Discussion with WHO	
			16:00 Disussion with UNICEF	
24	October 11	Wed.	9:00 Discussion with MSAS and report	Nouakchott
			9: 30 Visit to Central Storehouse	
			10: 30 Visit to Director of DPS, MSAS	
			Estimation acquirement from private enterprises	
25	October 12	Thu.	Nouakchott 11:30 (MR461) - Ddakar 12:30	Dakar
26	October 13	Fri.	9: 30 Report to Embassy of Japan	On the plane
			Report to JICA	
			Dakar 22 : 55 (AF719) -	
27	October 14	Sat.	- Paris 6 : 25	On the plane
			Paris 20:00 (NH-206) -	
28	October 15	Sun.	- Tokyo 14 : 25	

Appendix - 3 List of Party Concerned in the Recipient Country

- 1 Ministry of Health and Social Affaires (MSAS)
- (1) Authorities
  - Mr. Mohamed Salem Ould Merzoug, Minister
  - Dr. mohamed Ould Mohamed Salem, Secretary General
  - Dr. Mohamed Nezir Ould Hamed, DPS Director
- (2) Implementing agency
  - Dr. Sarif Mohamed Diallo, Coordinator of EPI Program
  - Mr. N'Disye Madembra, EPI Maintenance Technician Trainer
  - Dr. Sidi Mohamed Ould Mohamed, Coordinator of PNLP Program
- (3) Others
  - Dr. Mariem Taghla, Director of Pharmacy and Control

#### 2 DRASS and Health Center

- (1) DRASS
  - Dr. Satdou Doro Niang, Director of DRASS (Traza)
  - Dr. Diagana Cheikhou, Director of DRASS (Brakna)

#### (2) Health Center

Dr. Sareck Ould Vall, Director of Health Center Nouakchott, Ksar Dr. Mohamed El-Hafd Ould Bouh, Director of Health Center El Manhar, Brakna

#### 3 Ministry of Economy and Social Affaires

Mr. Limam Ahmed Ould Mohamedou, Director of Economic Cooperation

- 4 International Organization and NGO
- (1) WHO

Dr. El Hadi Benzerroug, Representative in Mauritania

### (2) UNICEF

- Ms. Ute Deseniss-Gros, Representative in Mauritania
- Ms. Hakoyama Fumiko, Responsible for program
- Dr. Issa Coulibaly, Responsible for Health Project
- Mr. Youssouf Koita, Responsible for EPI Program
- (3) EU
  - Ms. Francoise Mentre, Development Adviser

(4) GTZ

Dr. Ingolf Vereno, Director

- 5 Japanese Party
- (1) Embassy of Japan in Senegal SUZUKI Atsushi Secretary
- (2) JICA OFFICE in Senegal KUROKAWA Tsuneo Director KOBAYASHI Takemichi Stuff

## Procès-Verbal des Réunions

Etude sur le Projet de Lutte contre le Paludisme et de soutien au Programme Elargi de Vaccination

Coopération Financière Non-remboursable du Japon

Suite à la requête formulée par la République Islamique de Mauritanie, le Gouvernement du Japon a décidé de procéder à l'étude sur le Projet de soutien au Programme de Lutte contre Paludisme, et de soutien au Programme Elargi de Vaccination (ci-après dénommé le "Projet"). Cette étude a été confiée à l'Agence Japonaise de Coopération Internationale (ci-après dénommée la "JICA").

La JICA a envoyé une mission d'étude pour ledit Projet dirigée par Monsieur Tsuneo KUROKAWA, Représentant Résident au Sénégal de la JICA (ci-après dénommée la "Mission") en République Islamique de Mauritanie du 20 septembre au 12 octobre 2000.

La Mission a tenu une série de discussions avec les autorités mauritaniennes compétentes et a effectué une étude sur les lieux dans les zones faisant l'objet de l'étude.

A l'issue des discussions et des études sur le terrain, les deux parties ont confirmé les points principaux mentionnés dans l'appendice ci jointe.

Fait à Nouakchott, le 4 octobre 2000

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Mr. Tuneo KUROKAWA Chef de Mission Représentant Résident de la JICA au Sénégal

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Mr. Mohamed Salem Ould MERZOUG Ministre de la Santé et des Affaires Sociales

#### L'Appendice

1. Objectif du présent Projet

Le présent Projet a pour objectif de promouvoir la lutte contre le paludisme et de soutenir le Programme Elargi de Vaccination en vue d'améliorer la santé maternelle et infantile par l' approvisionnement en moustiquaires, en produits d'impregnation et en équipements de la chaîne de froid.

2 Zones bénéficiaires

Le Programme Elargi de Vaccination porte sur tout le pays. Le Projet de Lutte contre le Paludisme porte sur 8 (huit) wilayas endémiques (Traza, Brakna, Assaba, Gorgol, Guidimagha, Tagant, Hodh El-Chargui, Hodh El-Gharbi).

3. Organisme responsable et Organisme d'exécution L'organisme responsable du présent Projet est le Ministère de la Santé et des Affaires Sociales. L'organisme d'exécution du présent Projet est la Direction de la Protection Sanitaire. La lutte contre le paludisme est le ressort du Programme National de Lutte contre le Paludisme ; le soutien

à la vaccination relève du Programme Elargi de Vaccination et de la Division de la Santé Maternelle et Infantile. Les deux programmes seront conjointements exécutés sous la contrôle du cabinet du Ministre de la Santé et des Affaires Sociales.

4. Contenu de la requête formulée par la République Islamique de Mauritanie.

autorités les Mission, la discussions avec aux Suite mauritaniennes ont adressé une nouvelle requête portant sur la fourniture de matériels comme mentionné dans l'annexe-1. Cependant la décision finale d'acceptation du Projet sera prise après l'analyse des résultats de l'étude au Japon.

- 5. Système de la Coopération d'Aide Financière Non-Remboursable du Japon
- 1) La partie mauritanienne a compris le système de l'aide financière non-remboursable du Japon expliqué par la Mission dans l'annexe-2.
- 2)La partie mauritanienne a consenti à prendre les mesures nécessaires mentionnées dans l'annexe-3 pour le bon déroulement du Projet au cas où la décision de son exécution est prise dans le cadre de la coopération financière non-remboursable du Japon.

- 6. Calendrier de l'Etude
- 1) La Mission continuera l'étude jusqu'au 12 octobre 2000.
- 2) La JICA rédigera un rapport final et l' enverra aux autorités mauritaniennes.
- 7. Fonds de contrepartie
- 1) Le Ministère de la Santé et des Affaires sociales versera le montant de la vente des moustiquaires fournies par la coopération financière non-remboursable du Japon en Ouguiyas dans un compte ouvert à cet effet dans une banque au nom du Programme National
- de la Lutte contre le Paludisme. 2) Le fonds ainsi déposé sera utilisé pour le renouvellement des stocks en moustiquaires et produits d'impregnation en vue de promouvoir
- la lutte contre le paludisme en Mauritanie. 3) Les autorités concernées des deux Gouvernements se consulteront pour l'utilisation desdits fonds de contrepartie.
- 4) Les autorités mauritaniennes soumettront un rapport ecrit adressé au Gouvernement du Japon dans un délai d'un mois portant sur le montant et le détail d'utilisation des fonds de contrepartie sur la demande de celui-ci.
- 8. Autres points discutés
- Les deux parties ont discuté, confirmé et convenu de ce qui suit : 1) La partie mauritanienne a pris l'engagement de la disponibiliser
- le personnel et le budget nécessaires à l'exécution du Projet. 2) La partie mauritanienne a confirmé l'établissement d'un système
- de distribution et de suivi des moustiquaires en collaboration avec ses partenaires (JICA, OMS, Unicef, autres organisations).

Annexe-1

## LISTE DES EQUIPEMENTS

No.	Désignation	Quantité
1	Moustiquaires (2 personnes)	220.000 pcs
2	Insecticides (Recommandés par l'OMS)	220.000 doses
3	Petits réfrigérateurs (Standard OMS)	40 unités
4	Réfrigérateurs/congérateurs (Standard OMS)	92 unités
5	Petits congérateurs (Standard OMS)	37 unités
б	Grands congérateurs (Standard OMS)	53 unités
7	Véhicules wagon 4 x 4	2 unités
8	Véhicule une cabine Pick-up 4 x 4	2 unités

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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 :

 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 accélèrera 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.

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## 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 juridication 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 procés-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 et d'éviter tout délais indu provoqué par la sélection d'un autre consultant.

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## 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, doivents 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.

# Principaux travaux à exécuter par chaque Gouvernement

<u></u>		COUVERT	COUVERT
No.	ELEMENTS	PAR	PAR
		LE JAPON	L'RIM
1	PRISE EN CHARGE DES COMMISIONS SUIVANTES DE LA E	ANQUE DE	CHANGE
	JAPONAISE POUR LES SERVICES BANCAIRES BASES SUR L	ES ARRAN	GEMENTS
	BANCAIRES (A/B)	. <u> </u>	
	1) COMMISSION DE NOTIFICATION DE L'AUTORISATION DE		•
	PAIEMENT (A/P)		
	2) COMMISSION DE PAIEMENT		
2	DECHARGEMENT ET DEDOUANEMENT AU PORT DE DEBARQU	JEMENT D	U PAYS
	BENEFICIAIRE		T
	1) TRANSPORT VERS LE PAYS BENEFICIAIRE PAR MER (AIR)	•	
	DE PRODUITS DU PAYS D'ORIGINE		
	2) EXONERATION D' IMPOTS ET DEDOUANEMENT DES PRODUITS		•
	AU PORT DE DEBARQUEMENT DU PAYS BENEFICIAIRE		ļ
	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 SERVIICES		
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 FOURITURE DES PRODUITS ET DES SERVICES SPECIFIES		
	DANS LES CONTRATS VERIFIES		
5	EXPLOITATION, MAINTENANCE CORRECTE ET EFFICACE DES		
	INSTALATIONS CONSTRUITES ET DES EQUIPMENTS 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		

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