

The Study Report
for
The Project for Malaria Control (Phase II) and
Parasitic Diseases Control
in
Lao People's Democratic Republic

March 2002

Japan International Cooperation Agency

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PREFACE

In response to a request from the Government of the Lao People's Democratic Republic, the Government of Japan decided to conduct a study on the Grant Aid for Child Health, the Project for Malaria Control (Phase) and Parasitic Diseases Control and entrusted the Japan International Cooperation Agency (JICA) to conduct the study with the assistance of the Japan International Cooperation System (JICS).

JICA sent to Lao a study team from September 23 to October 10, 2001.

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 Lao People's Democratic Republic for their close cooperation extended to the team.

March 2002

Takao Kawakami

President

Japan International Cooperation Agency



Map of Lao People's Democratic Republic

ABBREVIATIONS

ACIPAC	: Asian Center for International Parasite Control
CLE	: Center of Laboratory and Epidemiology
CMPE	: Center of Malariology, Parasitology and Entomology
DAMN	: District Anti Malaria Nucleus
EU	: The European Union
GMP	: Good Manufacture Practice
IBN	: Impregnated Bed Net
PAMS	: Provincial Anti Malaria Station
PSI	: Population Service International
UNICEF	: United Nations Children's Fund
WB	: World Bank
WHO	: World Health Organization

TABLE OF CONTENTS

Preface

Location Map

Abbreviation

Chapter 1	Background of the Project	-----	1
Chapter 2	Contents of the Project	-----	3
2-1	Basic concept of the Project	-----	3
2-2	Basic Design of the Requested Japanese Assistance	-----	5
2-2-1	Design Policy	-----	5
2-2-2	Basic Plan	-----	11
2-2-3	Implementation Plan	-----	13
2-2-3-1	Implementation Policy	-----	13
2-2-3-2	Implementation Conditions	-----	13
2-2-3-3	Consultant Supervision	-----	14
2-2-3-4	Procurement Plan	-----	14
2-3	Obligations of Recipient Country	-----	15
2-4	Project Operation Plan	-----	16
2-5	Other Relevant Issues	-----	16
Chapter 3	Project Evaluation and Recommendation	-----	22
3-1	Project Effect	-----	22
3-2	Recommendations	-----	23

Appendices

1. Member List of the Study Team
2. Study Schedule
3. List of Parties Concerned in the Lao PDR
4. Minutes of Discussion

Chapter 1 Background of the Project

In 1996, the government of the Lao People's Democratic Republic (Lao PDR) began implementing the National Malaria Control (1996-2000), in line with which the Japanese government executed a grant aid project to provide 40,000 bed nets, equipment and supplies for malaria diagnosis and treatment, equipment for health education, transportation vehicles, and other items for 15 target districts in the 3 provinces of Khammouane, Bolikhamxay, and Vientiane.

As a result of the procurement of such equipment and supplies, the number of hospitalized malaria patients and malaria positive rate in these three provinces decreased, which is deemed mostly attributable to the provision of IBN (Impregnated Bed Nets) and other malaria control measures. The number of malaria patients is compiled based on the statistics of the hospitals in each province and district, as well as military and other hospitals. As shown in Figure 1-1 below, the number of malaria patients, as well as the total number of patients, decreased in all three provinces.

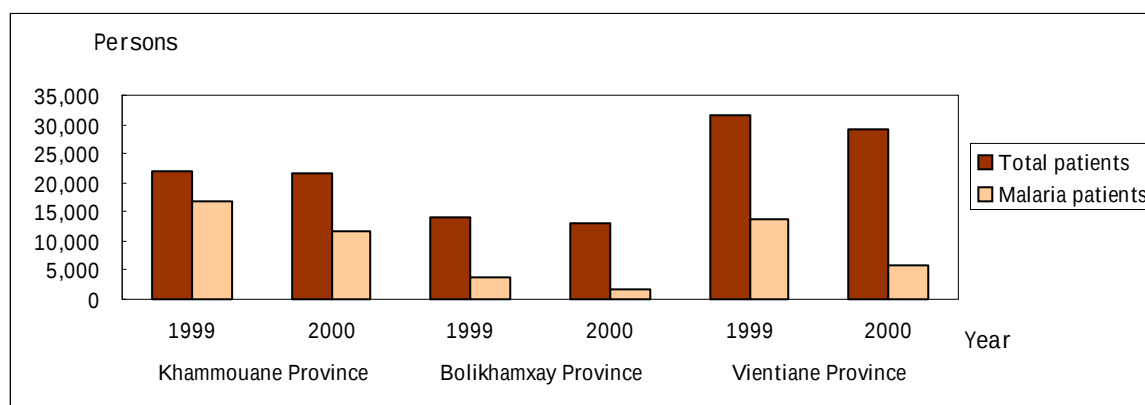


Figure 1-1: Changes in the Numbers of Total and Malaria Patients (1999-2000)

Malaria positive rate in these hospitals also declined in all three Provinces (See Figure 1-3). Normally, distributing essential drugs among villages is thought to be effective in lowering the positive rate. However, considering the fact that no additional distribution of such drugs has taken place since 1999, the decline is deemed mostly due to the use of IBN.

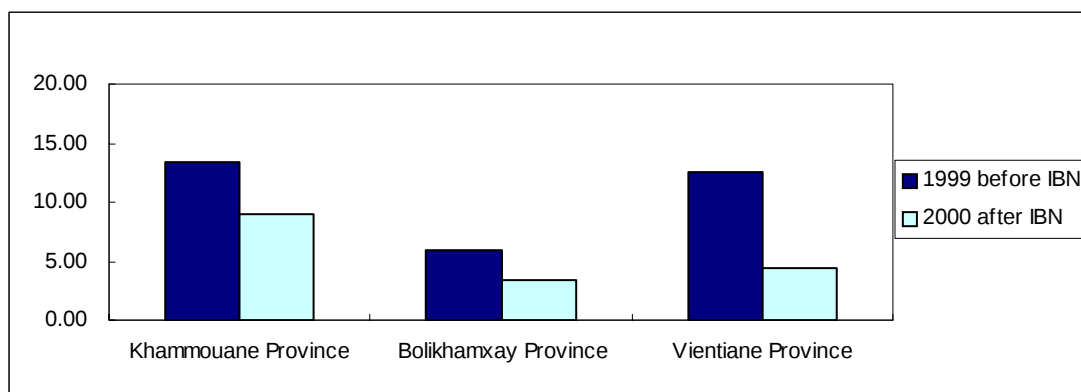


Figure 1-2: Changes in Positive Rate of Malaria Diagnosis (1999-2000)

As these graphs indicate, malaria control is taking effects in the IBN-distributed areas. However, as

malaria still remains to be the number-one cause of death in Laos today, the government of the Lao PDR developed the Second 5-Year National Malaria Control (2001 – 2005), for which only European Union (EU) and World Bank, but no other donors, announced the intention to extend their assistance.

Subsequently, the government of the Lao PDR requested the Japanese government to extend assistance for malaria control in 17 of 33 districts in 4 of 18 provinces in Laos. Bolikhamxay Province, one of the target provinces in the 1998 Japan's grant aid project, was excluded this time because the whole province would be covered by assistance of other donors.

As for parasitic diseases control, the government of the Lao PDR sent five trainees to the human resource development program of the Asian Center for International Parasite Control (ACIPAC) to foster leadership figures who would take initiative in conducting various parasitic diseases control programs. However, due to lack of basic equipment and supplies, those who completed the ACIPAC training program are struggling to carry out school-based parasitic diseases control activities, such as the "mass examination for parasite infections / deworming for school children" and "hygiene education."

To improve these situations, the Ministry of Health in Lao PDR requested the Japanese government a grant aid for the procurement of equipment and supplies for malaria control (bed nets, insecticide, microscopes, microscope cabinets, etc.) and for parasitic diseases control (parasite examination kit, anthelmintics, etc).

Chapter 2 Contents of the Project

2-1 Basic concept of the Project

(1) Overall Goal and Project Objective

The government of the Lao PDR has been conducting malaria control under its national plan since 1996 mostly by distributing impregnated bed nets (IBN). As a result, malaria mortality and morbidity rates decreased by 60% and 40% respectively during the five-year period (1996 – 2000). However, with malaria still being the number-one cause of death, the government of the Lao PDR has established the following objectives and main activities under the Second 5-Year Malaria Control Plan (2002-2005):

1) Objectives

- To reduce malaria mortality rate by 80%

- To reduce malaria morbidity rate by 50%

2) Main Malaria Control Activities

- Control of malaria vectors

- Malaria diagnosis and treatment

- Information, education and communication in malaria

- Operation research

- Management, supervision, and evaluation

Although national-level programs have yet to be established for parasitic diseases control, the government of the Lao PDR aims to achieve the following goals in the next five years:

1) Targets

- Decrease of soil-helminth (roundworms, whipworms, hookworms, etc.) transmitted infection rate among school-age children to less than 50%.

- Decrease *optisthorchis viverrini* infection rate to less than 50%.

As specific measures, the following activities are being planned:

2) Measures

- Nationwide survey on parasite infection rate in population

- Coordinate with the Ministry of Education (Basic Education, Private Education) for join planning

- Establishment of the National Committee for Parasite Control

- Establish “National Parasite Control Day”, that is the 1st June of each year

This project aims to contribute to the reduction of the morbidity and mortality rates of malaria, as well as the alleviation of ill health caused by parasite infection among school children, in the target areas.

(2) An Overview of this Project

This project will support malaria control activities of the government of the Lao PDR as outlined in Table 2-2 and in the target areas as listed in the table below (Table 2-1).

Table 2-1: Target Provinces and Districts of this Project

	Province		District
1	Khammouane	1	Boualapha
		2	Xaybouathong
		3	Xebangfay
		4	Hinboun
		5	Nongbok
2	Vientiane	1	Feuang
		2	Xanakham
		3	Hinherb
3	Oudomxay	1	Xay
		2	Houn
		3	Beng
		4	Namo
		5	Nga
4	Xiengkhouang	1	Phoukout
		2	Kham
		3	Mokmay
		4	Pek
Total	4 Provinces		17 Districts

Table 2-2: Input and Expected Outcome of this Project (malaria control)

	Main malaria control activities in Laos	Input of the Project	Expected outcome
	Control of malaria vectors	Bed nets and insecticide to support IBN activities will be procured. 3 people per bed net will be provided for 260,236 people who are not currently using bed nets. For each Provincial Anti-Malaria Station(PAMS), 20% of the total quantity for the entire Province will be procured.	Use of IBN will protect community people from contacting malaria vector mosquitoes, thereby reducing malaria infection and morbidity rate.
	Malaria diagnosis and treatment	Malaria diagnosis equipment, including microscopes, microscope cabinets, reagents, slide glass, and basic malaria diagnostic kits will be procured.	By accurately diagnosing malaria patients in the early stages on the district/village levels, treatment of the disease before developing into serious cases will become possible, thereby reducing malaria mortality rate.

	Information, Education and Communication in malaria	Health education equipment, such as audio/visual system, mobiles with AV equipment, and mobiles, will be procured.	Conducting education concerning the prevention and treatment of malaria will facilitate the proper use of IBN, thereby reducing the malaria infection rate.
	Operation research	Malaria-vector study equipment, such as microscopes, test tubes, and insect display case, and report-making equipment, such as computer systems, will be procured.	Malaria vectors will be studied, the result of which will be utilized in the future malaria control activities.
	Management, supervision, and evaluation	Guidance and monitoring services, such as support for the survey of IBN usage, will be implemented.	Information and data useful for the future malaria control activities will be collected in the target areas.

Table 2-3: Input and Expected Outcome of this Project (parasitic diseases control)

Parasitic diseases control programs in Laos	Input of the Project	Expected outcome
Develop plans in conjunction with the Ministry of Education	Parasitic diseases control equipment, such as parasite examination kits and anthelmintics will be procured.	By conducting parasitic diseases control programs through school health education in conjunction with the Ministry of Education, ill health caused by parasite infection among school children will be alleviated.

2-2 Basic Design of the Requested Japanese Assistance

2-2-1 Design Policy

This project is to support the smooth implementation of the Second National Malaria Control (2001-2005) of the government of the Lao PDR, as well as parasitic diseases control activities to be conducted by the people who have completed the ACIPAC human resource development program.

(1) Basic Policy

Malaria control programs in Laos have been conducted in 18 provinces/municipalities by coordinating the efforts of donor countries and aid organizations on the province or district level. This project, in line with the Second National Malaria Control (2001-2005), will focus on 17 of 33 districts in 4 provinces where no other donor countries or international aid organizations are extending their assistance. As for parasitic diseases control, donor countries and international organizations are dividing overall responsibilities rather than helping

specific target areas. While UNICEF is in charge of “Hygiene education, Safe water supply and sanitation” and WHO in charge of the “Development of educational materials,” this project intends to support the areas of “Parasite examination, Deworming, and Hygiene education through school health education” in 50 elementary schools in Xiengkhouang and Vientiane Provinces as shown in Table 2-4 below:

Table 2-4: Target Areas of Parasitic diseases control Program

Province	District	No. of Elementary Schools
Xiengkhouang	Phoukout, Kham, Pek	26
Vientiane	Feuang, Xanakham, Hinherb	24

Equipment items were selected based on the following four guidelines, and their quantities were determined based on the policies as outlined in Table 2-5.

The equipment shall be easy to operate and maintain.

The equipment shall be of a basic type, and its grade shall be appropriate to the technical levels of the Laotian staff.

Replacement items shall be of an equivalent type to those currently being used.

Basically, the equipment shall not require installation work.

Table 2-5: Policy on Determining the Quantity of Equipment to be Procured

	Equipment	Hygiene & Prevention Dept., MOH	CLE	CMPE	PAMS (4 Provinces)	DAMN (17 Districts)	Qty.	Policy on Determining the Quantity of Equipment
1	Bed net (standard)				13,400	66,000	79,400	1 bed net will be shared by 3 people. 66,000 nets will be procured to cover about 194,000 people who have yet to use IBNs. For each provincial PAMS, 13,400 nets corresponding to 20% of the total quantity to be distributed to each Province will be procured for the population growth and PR activities (village-level IBN health workers). The quantity was obtained by rounding up the required volume to the nearest hundred.
2	Bed net (fine mesh)				3,700	18,200	21,900	1 bed net will be shared by 3 people. 18,200 nets will be procured to cover about 54,000 non-users of IBNs in Oudomxay Province, a relatively-cool northern region. For PAMS in Oudomxay Province, 3,700 nets corresponding to 20% of the total quantity to be distributed to the Province will be procured for the population growth and PR activities (village-level IBN health workers). The quantity was obtained by rounding up the required volume to the nearest hundred.
3	Insecticide-treated bed net				900	4,200	5,100	1 bed net will be shared by 3 people. 4,200 nets will be procured to cover about 12,000 non-users of IBNs in Boualapha and Xaybouathong Districts of Khammouane Province, where free IBNs were procured under 1998 Children's Health Grant. For PAMS in Khammouane Province, 3,700 nets corresponding to 20% of the total quantity to be distributed to the Province will be procured for the population growth and PR activities (village-level IBN health workers). The quantity was obtained by rounding up the required volume to the nearest hundred.

	Equipment	Hygiene & Prevention Dept., MOH	CLE	CMPE	PAMS (4 Provinces)	DAMN (17 Districts)	Qty.	Policy on Determining the Quantity of Equipment
4	Insecticide				1,201	5,917	7,118	The volume of insecticide to cover 2 dipping operations will be procured. 1 litre of insecticide can impregnate 30 standard-type nets or 24 fine-mesh-type nets. Thus, to impregnate each type of nets, 5,293 litres and 1,825 litres will be needed respectively or total of 7,118 litres.
5	Binocular stereoscopic microscope			5	4		9	CMPE has 10 microscopes that need to be replaced. Taking into account the number of technicians, this project will procure 5. 1 will be procured for each PAMS, as they have yet to be equipped with a microscope.
6	Microscope cabinet (desiccant type)				6	9	15	1 case stores 1 microscope. 15 cases to store the above microscopes will be procured for the districts where electric supply is unstable.
7	Large microscope cabinet (electric type)			2			2	1 case stores 5 microscopes. Taking into account the power supply conditions and the number of microscopes to be procured under this project, 2 cases will be procured for CMPE.
8	Simple malaria diagnosis kit			62	264	1,321	1,647	The number of kits to cover village-level malaria diagnosis (20 kits/village) and identification of serious cases (1/9 of total malaria cases) for 1 year, as well as the quantity to be used at CMPE for training, will be procured.
9	Testing and sampling instrument (14 items)	Impregnation tool set, pH meter, slide box, hand counter, handy lens, etc.						Based on the number of malaria cases per year in the 4 provinces, 1-year supply will be procured. However, immersion oil will not be procured, as there are enough stocks at CMPE and in Khammouane Province.
10	Expendable supply for testing (12 items)	Gimsae solution, xylene, blood-collecting lancet, clove oil, etc.						
11	Glass instrument for testing (8 items)	Slide glass, cover glass, test tube, etc.						An enough quantity to conduct malaria diagnosis will be procured.

Parasite Control Equipment (10 items)

1	Parasite examination set			1			1	100,000 kits to conduct 4 health education sessions for 25,000 students in 50 schools plus 9,000 kits for training before conducting school health education activities, or a total of 109,000, will be procured.
2	Albendazole			200			200	200 bottles (1,000 tablets/bottle) containing 200,000 tablets will be procured for a total of 100,000 students who will take 2 tablets (400 mg) at a time.
3	Praziquantel			150			150	Based on the 40mg/kg dose, each student weighing 22.5kg will take 900mg or 1.5 (600mg) tablets. For a total of 100,000 students, 150 bottles (1,000 tablets/bottle) containing 150,000 tablets will be procured.
4	Weighing machine			10			10	To measure the weight and height of 500 students per school, 10 portable-type scales each will be procured.
5	Height meter			10			10	

	Equipment	Hygiene & Prevention Dept., MOH	CLE	CMPE	PAMS (4 Provinces)	DAMN (17 Districts)	Qty.	Policy on Determining the Quantity of Equipment
	Reference book for 6 parasite control (5 items)	Bench aids for the diagnosis of intestinal parasites, Bench aids for the diagnosis of malaria infections, Atlas of Medical Parasitology, etc.						10 copies of Atlas required for training the parasite-control medical staff will be procured for CMPE. A total of 30 copies of Atlas will be delivered to CMPE, which will be later distributed to Xiengkhouang and Vientiane Provinces (10 copies each) and 5 target Districts (6 copies each).
Malaria/Parasite Control Equipment (17 items)								
1	Audio System for IEC				4	17	21	To be procured for 4 provinces and 17 districts without audio system necessary for effective implementation of health education.
2	Visual System for IEC				2	9	11	To be procured for 2 provinces and 9 districts that are not equipped with visual system necessary for effective implementation of health education and that were not covered by the 1998 Children's Health Grant.
3	Binocular stereoscopic microscope		2	10	7	9	28	2 will be procured for the parasite department of CLE, which has been newly established and yet to be equipped with microscope. 10 will be procured for CMPE, as it lacks that quantity for conducting training. Each PAMS and DAMN will be provided with a sufficient quantity to cover the shortage.
4	Microscope cabinet (electric type)		2	5	5		12	1 case stores 1 microscope. A total of 12 cases will be procured for CLE, CMPE, and PAMS where stable power supplies are available.
5	Microscope lens cleaning kit		1	8	7	9	25	1 kit for 2 microscopes will be procured. At least 1 will be provided where only 1 microscope is to be procured.
6	Desktop computer system	1		2	2		5	1 system each will be procured for Department of Hygiene and Prevention and PAMS as they have yet to be equipped with a computer for malaria or parasite control activities. 2 will be provided for CMPE to supplement the shortage.
7	Laptop computer system	1		1	0		2	1 system each will be procured for Department of Hygiene and Prevention due to no computer and CMPE with an insufficient number of computers.
8	Mobile for monitoring	1					1	1 will be procured for Department of Hygiene and Prevention for monitoring activities, as its existing vehicle is deteriorated.
9	Mobile for monitoring and health education				4		4	2 cars each (total of 4) will e procured for the PAMS of Oudomxay and Xiengkhouang Provinces that are not equipped with mobiles. Khammouane and Vientiane Provinces will be excluded as they have been provided with mobiles under the 1998 Children's Health Grant.

	Equipment	Hygiene & Prevention Dept., MOH	CLE	CMPE	PAMS (4 Provinces)	DAMN (17 Districts)	Qty.	Policy on Determining the Quantity of Equipment
10	Motorcycle for monitoring and health education				2	9	11	1 each (total of 11) will be procured for the PAMS of Oudomxay and Xiengkhouang and DAMN that are equipped with no or aged motorcycles. Khammouane and Vientiane Provinces and their districts will be excluded from this project as they have been provided with motorcycles under the 1998 Children's Health Grant.
11	Office equipment (7 items)	Photocopy machine, Duplicator, Lao language typewriter,						1 copier each will be procured for the Health Department of Hygiene and Prevention and PAMS without copier and for CMPE with aged one. 1 type writer will be procured for each organization as the existing ones are deteriorated.

(2) Policy on Natural Environment

In selecting the equipment and supplies, the high-temperature/humidity climate of Laos should be taken into consideration. The fine-mesh bed nets that the Laotian side requested will be procured only for Oudomxay Province in the relatively-cool semi-tropical northern region, as the fine-mesh type does not allow good ventilation. The entire country of Laos is generally highly humid, which makes microscope lenses susceptible to mold. Thus, anti-mold type microscope cabinets in the quantity corresponding to that of the microscopes will be procured.

(3) Policy on Socio-Economic Conditions

Microscopes and microscope cabinets should be appropriate to electric power supply conditions in the target regions. More specifically, electric types will be procured for the central area of Vientiane Municipality, as well as the areas around the provincial capitals of Khammouane Province, Vientiane Province, and Oudomxay Province, where electric power services are available. For Xiengkhouang Province and the target districts of the four provinces, where stable power supply is unavailable, reflective-mirror-type microscopes and microscope cabinets that use desiccant will be procured.

(4) Policy on the Administrative, Operation, and Maintenance (financial) Capabilities of the Implementing Agency

CMPE, the implementing agency of the malaria control program, is carrying out malaria control using the funds donated by various international organizations and donor countries and paying for the administrative and other labor costs with the budget appropriated by the central government. The administrative and labor costs of provincial malaria stations and district malaria centers are covered by the budgets of provincial governments. For the operational cost of this project, CMPE is currently applying for appropriations. On the province level, besides provincial budgets, the provincial governments can appropriate the cost-recovery funds of the past IBN, which will be sufficient to cover the expenses for distributing IBN, dipping activities, malaria health education, and other activities under this project.

(5) Policy on Selecting the Grade of Equipment and Supplies

1) Malaria Control Equipment

Bed net (standard): The mesh size will be 156 holes per square inch with a thread thickness of 100 deniers. As this is the most commonly-used bed net in Laos for malaria control, this project will procure this type of bed nets for all the target regions except for certain areas.

Bed net (fine mesh): The mesh size will be 575 holes per square inch with a thread thickness of 40 deniers. This type of bed net was requested by the Laotian side because of its high durability. However, it has a disadvantage of poor ventilation. Thus, the fine-mesh type should be distributed only to relatively cool areas.

Insecticide-Treated Bed Net: This is an equivalent type to that procured under the 1998 Grand Aid Project "Malaria Control". Because it does not require annual re-dipping and therefore is suitable for remote areas. This project will procure such bed nets in a quantity sufficient to supplement the shortage in the areas that were covered by the previous Malaria Control. The fibers of this type of bed net are treated with insecticide, the effect of which usually lasts three to four years. The mesh size is smaller than 4 x 4(m) with a thread thickness of 150 deniers.

Insecticide: An equivalent type to that procured under the 1998 Grand Aid Project "Malaria Control" will be selected. Specifically, the choice of insecticide will be Deltamethrine SC1%, a long-lasting, low-toxicity drug approved by WHOPES and in accordance with the "Policies on Malaria Control in Lao PDR."

Binocular-type microscope: It should have enough magnification to identify malaria-vector mosquitoes. Electric light source (220V) was selected because the microscopes will be used in the areas where stable power supply is available.

Rapid diagnosis test kits for malaria: 95% or more of malaria cases in Laos are reported to be *Plasmodium falciparum* (P.f.) malaria, which can be fatal if not diagnosed and treated in early stages. Thus, a kit to diagnose P.f. malaria will be procured.

2) Parasitic diseases control Equipment

Parasite examination materials: It is comprised of mainly WHO-recommended Kato-Katz stool examination kit, as well as slide glass and other small items necessary for parasite screening.

Albendazole: For the extermination of soil-transmitted parasites (such as ringworm, whipworm, and hookworm), albendazole manufactured by GMP-certified factories will be procured.

Praziquantel: For the extermination of opisthorchi viverrini, praziquantel manufactured by GMP-certified factories will be procured.

3) Malaria/Parasitic diseases control Equipment

Binocular-type microscope: An equivalent type to that procured under the 1998 Grand Aid Project "Malaria Control" will be selected. Specifically, it will be a one-person type with 1,000 magnifications necessary for malaria diagnosis. The light source will be available both electricity (220V) and a reflective mirror to cope with unstable power supply conditions in Laos.

Microscope cabinet: Mold may grow on microscope lenses in the high-humidity environment of the target regions. Thus, two types of cabinets will be procured depending on the power supply conditions of each target region: one uses silica –gel or other drying agents and the other uses

electricity.

Audio System for IEC: An audio set will consist of an amplifier (with cassette – tape and CD players), microphone, wireless microphone, and speakers. The grade will be the same level as those procured under the 1998 Grand Aid Project “Malaria Control”.

Visual System for IEC: An equivalent model (consisting of VHS, multi-type video deck, 21-inch TV monitor, and portable generator) to that procured under the 1998 Grand Aid Project “Malaria Control” will be selected.

Desktop computer system: The system will consist of a computer, inkjet printer, and UPS. The computer unit will be of a general-purpose type with a CPU (Pentium or higher) and OS (Windows 2000 with Lao fonts).

Laptop computer system: The system will consist of a computer, portable inkjet printer, LCD, digital camera, and carrying case. The computer unit will have a CPU (Pentium or higher) and OS (Windows 2000).

Mobile for monitoring: 4WD station wagons with a displacement of 2800cc or more that can withstand poor road conditions in Laos will be procured.

Mobile for monitoring and health education: 4WD cars with a displacement of 2800cc or more that can withstand poor road conditions in Laos will be procured. Since the mobile will be used on the provincial level, double-cabin pickup trucks will be procured so that they can carry cargos and passengers when needed.

Motorcycles for monitoring and health education: Off-road type with a carrier that can withstand poor road conditions in Laos will be procured. They will be provided with helmets for safety.

(6) Policy on Determining Procurement Method and Construction Period

Since it would be very difficult to transport goods during the rainy season in Laos, the implementation of this project will be so scheduled that the Bed nets will be distributed among community people before the rainy season.

2-2-2 Basic Plan

(1) Overall Plan

Malaria control programs in Laos are being implemented through the malaria network under CMPE as the central implementing agency. This network has been sufficiently developed to carry out various programs. Thus, the equipment and supplies to be procured under this project will also be distributed and managed through this network.

Bed nets and insecticide, the two main items of malaria control equipment, will be temporarily stored at the each PAMS and each DAMN before being distributed to their end users (i.e. community people) according to the IBN activities implementation plan of each district. Parasite examination sets and anthelmintics, the main parasitic diseases control equipment, to be used in school health education programs will be temporarily stored at CMPE, from which necessary quantities will be taken out twice a year and transported to the target areas for the biannual activities. Health education and monitoring equipment, the main items for both malaria and parasitic diseases control activities, will be stored and managed at each PAMS and

DAMN and will be used for health education and monitoring and evaluation activities of each province and district according to their implementation schedules.

(2) Equipment Plan

Table 2-6 lists the specification and quantity of each equipment item that were determined based on the policies described earlier.

Table 2-6: Equipment Plan

Malaria Control Equipment (42 items)

	Equipment	Specification	Quantity	Application
1	Bed net (standard)	Material: 100% polyester, thickness: 100 deniers, mesh size: 156 holes/sq. inch, size: 200(W) x 190 (L)x 160 (H) cm, color: blue	79,400 nets	Prevention of malaria infection
2	Bed net (fine mesh)	Material: 100% polyester, thickness: 40 deniers, mesh size: 575 holes/sq. inch, size: 200(W) x 190 (L)x 160 (H) cm, color: blue	21,900 nets	Prevention of malaria infection
3	Insecticide-treated bed net	Material: 100% polyester, thickness: >150 deniers, mesh size: 4x4 mm, size: 190(W) x 180 (L)x 150 (H) cm	5,100 nets	Prevention of malaria infection
4	Insecticide	Deltamethrine SC 1%	7,118 liters	Impregnation
5	Binocular stereoscopic	Total magnification: 20 - 60, power source: 220V	9 units	Identifying malaria vector mosquitoes
6	Microscope cabinet (dessicant type)	Outer dimension: 40(W) x 40(D) x 65(H) cm	15 cases	Storing microscopes (anti-mold)
7	Large microscope cabinet (electric type)	Outer dimension: 120(W) x 70(D) x 180(H) cm	2 cases	Storing microscopes (anti-mold)
8	Rapid diagnostic test kit for malaria	For diagnosing P.f. malaria, 25 tests/box	1,647 boxes	Diagnosis of P. f.malaria
9	Examination and prepared slide instrument (14 items)	Impregnation tool set, pH meter, slide box, hand counter, handy lens, etc.	Dipping, malaria diagnosis, prepared slide making	
10	Expendable supply for examination (12)	Gimsae solution, xylene, blood lancet, clove oil, etc.		
11	Glassware for testing (8 items)	Slide glass, cover glass, test tube, etc.		

Parasite Control Equipment (10 items)

	Equipment	Specification	Quantity	Application
1	Parasite examination materials	(1 each of Kato-Katz kit, plastic bag for storing stool sample, slide glass, and plastic spoon for handling stool) x 109,000	1 set	Parasite examination
2	Albendazole	200 mg, 1,000 tablets/bottle	200 bottles	Deworming
3	Praziquantel	600 mg, 1,000 tablets/bottle	150 bottles	Deworming
4	Weight Scale	Range: 0 - 100kg, Graduations: 0.5 kg	10 units	Measuring the weight of students
5	Height Scale	Range: 0 - 200cm, Graduations: 0.1cm	10 units	Measuring the height of students
6	Reference books for parasitic diseases control (5 items)	Bench aids for the diagnosis of intestinal parasites, Bench aids for the diagnosis of malaria infections, Atlas of Medical Parasitology, etc.	Parasitic disease control training	

Malaria/Parasite Control Equipment (17 items)

	Equipment	Specification	Quantity	Application
1	Audio System for IEC	1 each of amplifier (w/cassette and CD), microphone, wireless microphone, speaker	21 sets	Education of malaria and parasites
2	Visual System for IEC	1 each of portable generator, VHS multi-type video deck, 21-inch TV monitor	11 sets	Education of malaria and parasites
3	Binocular microscope	Eye lens: x10, object lens: x4, x10, x40, light source(200V)/reflective mirror 2-way type	28 units	Examination of malaria and parasites
4	Microscope cabinet (electric type)	Outer dimension: 40(W) x 40(D) x 65(H) cm	12 cases	Storage of microscopes (anti-mold)
5	Microscope lens cleaning kit	Lens cleaning solution, driver, brush, cleaning cloth	25 sets	Maintenance of microscopes
6	Desktop computer system	{Computer (main unit, display, keyboard, mouse, mouse pad), printer (color inkjet), UPS} x 1 each	5 sets	Monitoring, assessment, report making
7	Laptop computer system	{Computer (CD-ROM, FD, mouse, mouse pad), printer (portable, color inkjet, cable), carrying case, LCD, digital camera} x 1 each	2 sets	Report making, presentation, training
8	Vehicle for traveling guidance	4WD, displacement: 2800cc or higher, diesel engine	1 units	Monitoring and assessment activities
9	Vehicle for monitoring and health education activities	4WD double-cabin pickup truck, displacement: 2800cc or higher, diesel engine	4 units	Monitoring, assessment, malaria/parasite-control education
10	Motorcycle for monitoring and health education activities	125-cc off-road, 2 or 4 cycles, with helmet	11 units	Monitoring, assessment, malaria/parasite-control education
11	Office equipment (7 items)	Photocopy machine, Duplicator, Lao language typewriter, etc.		

2-2-3 Implementation Plan**2-2-3-1 Implementation Policy**

All the equipment and supplies to be procured under this project will be inspected both for quality and quantity by third-party organizations before loading. Anthelmintics, however, will also be inspected by the consultant at their production facilities, as the manufacturers and the manufacturing processes need to be supervised carefully in order to meet the required quality and delivery date.

The equipment and supplies will be delivered to the following 24 final destinations: 3 central agencies (Department of Hygiene and Prevention of the Ministry of Health, CLE, and CMPE), 4 PAMS, and 17 DAMN.

2-2-3-2 Implementation Conditions

Considering the fact that the transportation of goods is difficult during the rainy season and that malaria

incidence rises during the latter half of each rainy season, the distribution of bed nets to community people should be completed before the beginning of the rainy season. Since the insecticide-treated bed nets and insecticide will basically come from particular brands, the manufacturers should be so instructed that they will set the price appropriately to treat Japanese tenderers fairly and equally.

2-2-3-3 Consultant Supervision

Once the equipment and supplies arrive in Laos, the local procurement staff will coordinate the entire operations such as unpacking, inspection, resealing, sorting out, delivery and handover.

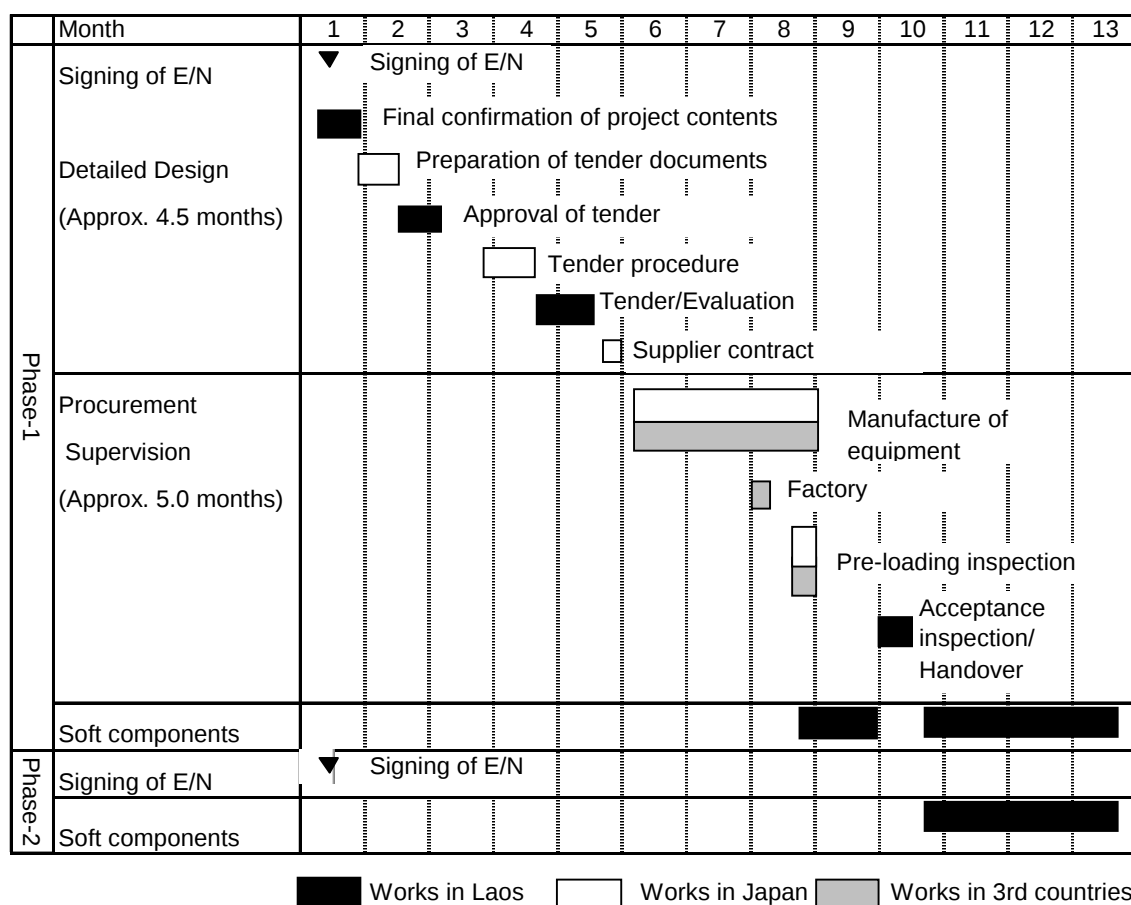
2-2-3-4 Procurement Plan

Along with audio system for IEC, mobile for monitoring, mobile for monitoring and health education, and motorcycle for monitoring and health education, necessary quantities of their spare parts will be procured so that they can be serviced by their local agents or dealers for at least one year after procurement. Table 3-7 below lists the items to be procured from third countries.

Table 3-7: Reason for Procuring from Third Countries

Item	Reason for sourcing from 3rd countries
Bed net (standard)	Thai products will be procured, as they are less expensive and are able to be manufactured in less number of days than Japanese products.
Bed net (fine mesh)	
Desktop computer system	3rd-country products will be procured from distributors in Laos, as they are less expensive and more easily maintained locally than Japanese products.
Copy machine	
Lao typewriter	
Parasite examination materials	Thai or India products will be procured, as they are less expensive than Japanese products.
Albendazole	DAC member country products will be procured, as they are less expensive than Japanese products.
Praziquantel	
Insecticide-treated bed net	Chinese bed nets and Thai insecticide will be procured to be consistent with those procured under Malaria Control Program (Phase I) in 1998.
Insecticide	
Rapid diagnostic test kit for malaria	South African or India products will be procured, as it is not produced in Japan or Laos.
Bench aids for the diagnosis of intestinal parasites	These textbooks published by WHO are not available in Japan or Laos. They will be procured from Switzerland.
Bench aids for the diagnosis of malaria infections	
Basic laboratory methods in medical parasitology	
Atlas of Medical Parasitology	This book is published by Mahidol University in Thailand, and equivalent book is not available in Japan or Laos. It will be procured from

2-2-3-5 Implementation Schedule



2-3 Obligations of Recipient Country

Listed below are the works to be undertaken by the Laotian side in implementing this project. None of the items to be procured under this project will require installation work.

- (1) To ensure proper and prompt customs clearance of the equipment and supplies and bear associated expenses.
- (2) To secure warehouse spaces to store the equipment and supplies to be procured.
- (3) To transport and distribute the equipment and supplies from the above storage spaces to their final destinations and pay associated expenses.
- (4) To bear financial charges associated with sending the notice of and making payment according to the Authorization to Pay (A/P) that is issued in accordance with the Banking Arrangement (B/A) for this project.
- (5) To make sufficient appropriations and secure personnel necessary for the proper operation and maintenance of the procured equipment and supplies.
- (6) To provide necessary facilities for the implementation of guidance and monitoring services of this project, such as making a list of attendants of relevant meetings, securing of meeting spaces, and accompanying the Japanese staff to the fields.

2-4 Project Operation Plan

The Ministry of Health has its own medical equipment service center that repair medical and other types of equipment. The equipment to be procured under this project will also be repaired at this service center in case of failure. However, the equipment will be maintained properly for the most part through daily maintenance work at the current technical level, as it does not require sophisticated repair techniques.

In addition, the staff members of the provincial malaria stations and the district malaria centers will be able to properly store and control the bed nets and insecticide, as they have already gained experience in handling such tasks during the first phase of the Malaria Control Program.

2-5 Other Relevant Issues

Plan of Guidance and Monitoring Service

(1) Background

Presently, the government of the Lao PDR is implementing the Second Malaria Control Program using mostly insecticide-impregnated bed nets (IBN). This project aims to support such malaria-control efforts by procuring a wide range of equipment and supplies, including IBN-related items (such as bed nets and insecticide), malaria diagnosis equipment (such as microscopes and reagents), entomology equipment (such as microscopes, reagents, and slide glass), health education equipment (such as audio and visual system for IEC), and equipment for monitoring and evaluation activities (such as computers and vehicles).

The malaria control program in Laos is now entering its second phase with the malaria network system for implementing the program having been completed for the most part. The network system seems adequate to fully utilize the equipment and supplies to be procured under this project. However, considering the fact that malaria is still the number-one cause of death in Laos causing a great deal of social and economic losses, the promotion of malaria control is urgently needed to benefit community people as quickly as possible. Thus, to expedite the swift and efficient implementation of the project, it is important to dispatch expert personnel from Japan.

(1) Outcome

	Outcome	Activities	
1	The progress of malaria control activities is monitored.	1	Support for the proper use of procured equipment and the proper collection and management of fees.
		1-1	Support for the development of IBN distribution plan.
		1-2	Support for the proper sales of IBN (including impregnation operation and the collection and management of fees.

		1-3	Support for the development of plan and implementation for health education for malaria.
2	Information and data useful for the future malaria control activities are collected.	2	Support for the survey of the usage, etc. of IBN.
		2-1	Support for the survey of the usage of IBN.
		2-2	Support for the survey of the malaria control activities in Oudomxay Province.
		2-3	Support for the preparation of unified forms for IBN-related activities.
3	The logistics system is improved.	3	Support for the improvement of the inventory control system.
		3-1	Support for the preparation of inventory-control forms and documents.

(2) Implementation Approach

The Japanese side will support the management of the project in order to facilitate the performance of Laotian side's responsibilities.

(1) Activities (Input Plan)

Guidance and monitoring services of this project will be implemented in three installments; twice in Phase-I and once in Phase-II.

Phase		Timing	Main Activities
I	1	Before handover of equipment	Support for the development of IBN distribution plan (1-1) Support for the survey of Oudomxay Province (2-2) Support for the preparation of unified forms (2-3) Support for inventory control (3-1)
	2	When distributing bed nets to residents	Support for the proper sales of IBN and the collection/management of fees (1-2) Support for the development of plan and implementation of health education (1-3) Support for the survey of IBN usage (2-1)
II	3	When re-dipping bed nets (About 1 year after phase I-2)	Support for the proper re-dipping and the collection/management of fees (1-2) Support for the development and implementation of health education plans (1-3) Support for the survey of Oudomxay Province (2-2)

Detail of activities in each phase is as follows:

Phase I-1: Before Handover of Equipment

I-1	Activity	Support for the development of IBN distribution plan
	Contents	Visit PAMS in the four provinces to support the development of IBN distribution plans for the 17 target Districts of this project. As an output, submit a report (distribution plan) to each province, CMPE (central agency), and other relevant organizations.
	Output	Report (distribution plan)
	Period	{ Travel A* (0 day) + Discussion (2days) } x 1 province = 2 days { Travel A (1 day) + Discussion (2days) } x 1 province = 3 days { Travel A (2 days) + Discussion (2days) } x 2 provinces = 8 days Total of 13 days (if conducted as a single task)
	Personnel	1 engineer, 1 interpreter (Lao English)
2-2	Activity	Support for the survey in Oudomxay Province
	Contents	Support the preparation of the survey plan of malaria control activities to be conducted in Oudomxay Province.
	Output	Survey plan prepared at CMPE and PAMS in Oudomxay Province.
	Period	Travel (2 days) + Discussion (7 days) = 9 days (if conducted as a single task)
	Personnel	1 engineer, 1 interpreter (Lao English)
2-3	Activity	Support for the preparation of unified forms
	Contents	Support the organization of a working-group meetings. Agenda: Identification of problems in the current forms, development of solutions, and preparation of unified forms.
	Output	Minutes of working-group meetings and unified forms
	Period	Working-group meeting (2 days x 2) = 4 days
	Personnel	1 engineer, 1 interpreter (Lao English), 1-2 staff from each department of CMPE + Director/Deputy Director = 7-12 persons
3-1	Activity	Support for inventory control
	Contents	Support the organization of a working-group meetings. Agenda: Identification of problems in current inventory control, development of solutions, and preparation of an improved control plan.
	Output	Minutes of working-group meetings and improvement plan.

	Period	Working-group meeting (2 days x 2) = 4 days
	Personnel	1 engineer, 1 interpreter (Lao English), 1-2 staff from each department of CMPE + Director/Deputy Director = 7-12 persons

* Travel A: Travel from the nation's capital to the provincial capital

Phase I-2: When distributing bed nets to residents

1-2	Activity	Support for the proper sales of IBN and the collection/management of fees
	Contents	Select and visit 2 districts and 4 villages per province (total of 16 villages in 4 provinces), and support the sales of IBN, as well as the collection and management of fees.
	Output	Submit a report (with regard to fee collection and management) to the relevant organizations on the district, province, and central (CMPE) levels.
	Period	Travel A (0day x 1 province + 1day x 2districts) + Field (1day x 4 villages) + Travel B** (2days) = 8 days Travel A (1day x 1 province + 1day x 2districts) + Field (1day x 4 villages) + Travel B (2days) = 9 days Travel A (2days x 2provinces +1day x 4districts) + Field (1day x 8 villages) + Travel B (2days x 2provinces) = 18 days Total of 35 days (if conducted as a single task)
	Personnel	1 engineer, 1 interpreter (Lao English)
1-3	Activity	Support for the development of plan and implementation of health education
	Contents	Select and visit 2 districts and 4 villages per province (total of 16 villages in 4 provinces), and support the development and implementation of health education plans.
	Output	Submit a report (with regard to health education) to the relevant organizations on the district, province, and central (CMPE) levels.
	Period	Travel A (0day x 1 province + 1day x 2districts) + Field (1day x 4 villages) + Travel B** (2days) = 8 days Travel A (1day x 1 province + 1day x 2districts) + Field (1day x 4 villages) + Travel B (2days) = 9 days Travel A (2days x 2provinces +1day x 4districts) + Field (1day x 8 villages) + Travel B (2days x 2provinces) = 18 days Total of 35 days (if conducted as a single task)
	Personnel	1 engineer, 1 interpreter (Lao English)

2-1	Activity	Support for the survey of IBN usage
	Contents	Select and visit 2 districts and 4 villages per province (total of 16 villages in 4 provinces), and support the survey of IBN usage.
	Output	Submit a report (of IBN survey) to the relevant organizations on the district, province, and central (CMPE) levels.
	Period	Travel A (0day x 1 province + 1day x 2districts) + Field (1day x 4 villages) + Travel B** (2days) = 8 days Travel A (1day x 1 province + 1day x 2districts) + Field (1day x 4 villages) + Travel B (2days) = 9 days Travel A (2days x 2provinces + 1day x 4districts) + Field (1day x 8 villages) + Travel B (2days x 2provinces) = 18 days Total of 35 days (if conducted as a single task)
	Personnel	1 engineer, 1 interpreter (Lao English)

** Travel B: Travel from provincial capital to district capital

Phase II-3: When re-dipping Bed net (1 year after phase I-2)

1-2	Activity	Support for the proper re-dipping and the collection/management of fees
	Contents	Re-visit the 16 villages in 4 provinces to support the re-impregnation of Bed nets and the collection and management of fees.
	Output	Submit a report (with regard to fee collection and management) to the relevant organizations on the district, province, and central (CMPE) levels.
	Period	Travel A (0day x 1 province + 1day x 2districts) + Field (1day x 4 villages) + Travel B** (2days) = 8 days Travel A (1day x 1 province + 1day x 2districts) + Field (1day x 4 villages) + Travel B (2days) = 9 days Travel A (2days x 2provinces + 1day x 4districts) + Field (1day x 8 villages) + Travel B (2days x 2Provinces) = 18 days Total of 35 days (if conducted as a single task)
	Personnel	1 engineer, 1 interpreter (Lao English)
1-3	Activity	Support for the development of plan and implementation of health education
	Contents	Re-visit the 16 villages in 4 provinces to support the development of plan and implementation of health education.

	Output	Submit a report (with regard to health education) to the relevant organizations on the district, province, and central (CMPE) levels.
	Period	Travel A (0day x 1 province + 1day x 2districts) + Field (1day x 4 villages) + Travel B** (2days) = 8 days Travel A (1day x 1 province + 1day x 2districts) + Field (1day x 4 villages) + Travel B (2days) = 9 days Travel A (2days x 2provinces +1day x 4districts) + Field (1day x 8 villages) + Travel B (2days x 2provinces) = 18 days Total of 35 days (if conducted as a single task)
	Personnel	1 engineer, 1 interpreter (Lao English)
2-2	Activity	Support for the survey of Oudomxay Province
	Contents	Support the preparation of the 2 nd survey plans of malaria control program to be conducted in Oudomxay Province.
	Output	Survey plans prepared at CMPE and PAMS in Oudomxay Province.
	Period	Discussion (7days) + Travel (2days) = 9days (if conducted as a single task)
	Personnel	1 engineer, 1 interpreter (Lao English)

(4) Provision of Labor

Japanese consultant will directly support the above guidance and monitoring service activities. Direct support seems to be the most appropriate approach, as the activities involve handling of funds, such as sales of IBN and collection and management of fees.

Chapter 3 Project Evaluation and Recommendation

3-1 Project Effect

Implementation of this project is expected to bring about the following specific benefits:

(1) Direct Effects

- 1) Procurement of about 100,000 bed nets will create about 260,000 new users of IBN among community people of the target areas thereby protecting them from malaria infection and consequently reducing the morbidity and mortality rates.
- 2) Procurement of audio/visual system for IEC will facilitate the effective education activities against malaria and parasitic diseases and consequently community people gain accurate information.
- 3) Parasitic diseases control activities through school health education will alleviate the ill health caused by parasites among 25,000 school children.

(2) Indirect Effects

Implementation of comprehensive malaria control will reduce the morbidity rate of the disease, which will lead to the reduction of medical expenses. In addition, reduced mortality rate will improve the productivity of the malaria endemic areas, thereby contributing to the growth of Laotian economy.

	Present Status and Problems	Solutions to be Offered by the Project	Expected Benefits and Improvements
1	80% of the population in Laos is believed to live in malaria endemic areas. Despite the National Malaria Control Program that has been implemented since 1996, the disease remains to be the number one cause of death in Laos today.	Target: 4 provinces, 17 districts. Bed nets, insecticide, and microscopes, that are necessary for the implementation of the government of the Lao PDR's 2 nd Malaria Control Program will be procured. Support for the Program through the installment of guidance and monitoring services will be implemented.	Procurement of 3-person bed nets will create about 260,000 new users of IBN. Support for the Malaria Control Program will expedite its efficient implementation in the target regions.
2	Despite the high infection rate of 80% that was found at the time of the Parasite Status Survey conducted in the early 1990s, no parasitic diseases control measures have taken place. Under the 2001 National Health Development	Parasite examination kits, anthelmintics, and other equipment and supplies necessary for the implementation of parasitic diseases control programs through school health education will be procured.	Conducting parasitic diseases control programs in 50 schools (500 students per school), the ill health caused by parasite infection among 25,000 school children will be alleviated.

	Plan, the government of the Lao PDR intends to implement parasitic diseases control programs for school children.	Program will be conducted by the personnel who has completed the ACIPAC training course.	
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3-2 Recommendations

The government of the Lao PDR has been implementing malaria control since 1996 as part of its National Program, which entered its second phase in 2001. At present, with the assistance of EU, World Bank, and this project, a sufficient quantity of bed nets, the main tool for malaria control, has been finally secured for community people in malaria endemic areas. In other words, the foundation work for malaria control is almost complete at this stage.

The next challenge is how to ensure periodic re-dipping of bed nets that have been distributed among community people on a continuing basis. Based on the facts that bed nets have been spread among community people and that bed nets are becoming available in consumer markets, Population Service International(PSI), a non governmental organization, has began distributing home-dipping kits under the concept of social marketing. However, since the purchase of such products is inevitably limited to certain regions and socioeconomic class of people, the re-dipping activities by CMPE and other public malaria network organizations must be continued.

Provincial governments could possibly appropriate the cost recovery fund for the purchase of insecticide and bed nets. However, such funds are usually used only for purchasing domestic malaria drugs, because the value of Kip, the monetary currency of Laos, is unstable and therefore is not suitable for purchasing bed nets and insecticide that must be imported. To ensure continued IBN activities, certain financial adjustment may need to take place, such as appropriating a portion of the budget for purchasing malaria drugs for purchasing insecticide.

To support the above, both public and private organizations in Laos should coordinate their efforts so that the distributed bed nets will be re-dipping on a continuing basis.

Member List of the Study Team

1. Dr. Yasuo SUGIURA

Leader

Bureau of International Cooperation, International Medical Center of Japan
Ministry of Health, Labour & Welfare

2. Mr. Masaru KOZONO

Project Coordinator

Grand Aid Management Department
Japan International Cooperation Agency

3. Mr. Akira WATANABE

Equipment Planning 1

Grand Aid Management Department
Japan International Cooperation System

4. Ms. Naoko NODA

Equipment Planning 2

Grand Aid Management Department
Japan International Cooperation System

Appendix 2

Study Schedule

	Date		Activity	
			Leader	JICS
1	21-Sep	Fri		Narita10:10(NH917) → Bangkok4:25 Market research
2	22-Sep	Sat		Market Research (Bed net Factory, Insecticide)
3	23-Sep	Sun		Bangkok08:20(TG690) → Vientiane09:30 10:30 Meeting with JICA Lao Office·JOCV 14:00 Market Research (PC, Photocopy)
4	24-Sep	Mon	Narita10:10(NH917) → Bangkok14:25	09:00 Courtesy Call JICA Lao Office, Confirmation of Schedule 10:00 Courtesy Call & Meeting with DHP, MOH 14:00 Courtesy Call & Meeting with CMPE
5	25-Sep	Tue	Meeting with ACIPAC Project, University of Mahidol	08:30 ~ Meeting with CMPE 16:00 Market Research (Medical Equip.) 19:00 Meeting with the head of Khammouane PAMS
6	26-Sep	Wed	Bangkok08:20(TG690) → Vientiane09:30 11:30 Courtesy Call & Meeting with JICA 14:30 Courtesy Call Minister of Health 15:30 Meeting with DHP, MOH 17:00 Meeting with KOICA	09:30 Market Research (Vehicle・Motorcycle) 11:30 ~ same schedule as the leader
7	27-Sep	Thu	08:45 Meeting with CMPE 14:00 Courtesy Call & Meeting with CIEH 14:45 Medical Equipment Service Center 15:30 Courtesy Call & Meeting with CLE	AM: Same schedule as the leader PM: Meeting with CMPE
8	28-Sep	Fri	Field Survey (Vientiane Province) 08:40 Meeting with PAMS 11:00 Hinheub District Health Office 13:00 Hinheub, Viengthong Village 16:30 Courtesy Call Embassy of Japan	Same schedule as the leader
9	29-Sep	Sat	09:30 Meeting with DHP, MOH 10:20 Meeting with CHT 13:30 Meeting with CMPE 17:00 Meeting with CHT	Same schedule as the leader
10	30-Sep	Sun	09:30 Meeting with PSI 12:30 Internal Meeting	12:30 Internal Meeting Vientiane16:05(QV503) → Oudomxay16:50
11	1-Oct	Mon	09:00 Meeting with DHP, MOH 13:30 Meeting with WB	Field Survey (Oudomxay Province) 09:00 Oudomxay Health Office Meeting 13:00 Oudomxay Nga District Health Office/Hp 19:00 Oudomxay JOCV
12	2-Oct	Tue	09:00 Meeting with WHO	09:00 Meeting with Oudomxay Prov. PAMS Oudomxay17:20(QV504) → Vientiane18:06
13	3-Oct	Wed	Field Survey (Khammouane Province) AM: Move to Khammouane Prov. 15:00 Courtesy Call Health Office 15:30 Meeting with PAMS	Same schedule as the leader
14	4-Oct	Thu	08:00 Xebangfay District Health Office/Hp 09:30 Xebangfay, Tamlay Village PM: Move to Vientiane	Same schedule as the leader

	Date		Activity	
			Leader	JICS
15	5-Oct	Fri	10:30 Meeting with UNICEF 14:00 Meeting with CMPE 15:00 Meeting with EU	Field Study(Xiengkhouang Prov.) Vientiane 07:45(QV401)→Xiengkhouang08:16 09:00 Meeting with Prov. Health Office 11:30 Primary school in Pek district 14:00 Phoukout district Health Center & Hp 16:00 Xiengkhouang PAMS
16	6-Oct	Sat	14:00 Internal Meeting 19:00 Meeting with CMPE	07:00 Xiengkhouang Health Office Xiengkhouang08:45(QV402)→Vientiane 09:16 10:00 Meeting with CMPE PM: Same schedule as the leader
17	7-Oct	Sun	Internal Meeting	Internal meeting
18	8-Oct	Mon	08:30 ~ Discussion at CMPE	Same schedule as the leader
19	9-Oct	Tue	08:30 Confirm Minutes at CMPE 11:30 Signing Minutes of Discussion 13:00 Report to JICA 14:00 Report to Embassy of Japan	AM: Same schedule as the leader 14:00 Meeting with CMPE
20	10-Oct	Wed	Vientiane 10:30(TG691)→Bangkok11:35 14:30 Meeting with Univ. Mahidol	Vientiane 10:30(TG691)→Bangkok11:35
21	11-Oct	Thu	Bangkok 10 : 50(TG640)→Narita19 : 00	Same schedule as the leader

DHP : Department of Hygiene and Prevention

CMPE : Center of Malariology, Parasitology and Entomology

CIEH : Center for Information and Education for Health

CLE : Center for Laboratory and Epidemiology

List of Parties Concerned in Lao PDR

Organization	Name	Position
Central		
Ministry of Health	Dr. Ponmek Dalaloy	Minister of Health
Cabinet	Mrs. Chanthanom Manodham	Director
	Dr. Nao Butta	Deputy Director
Department of Hygiene and Prevention	Dr. Bounlay Phommasack	Deputy Director General
	Phonepraseuth	ACIPAC trainee
	Dr. Sibounhom Archkhawongs	Director
Center of Malariology, Parasitology and Entomology (CMPE)	Dr. Samlane Phompida	Director
	Dr. Simone Nambanya	Chief of Technical and Epidemiology Unit
	Dr. Saythong Bandith	Chief of Administration Unit
	Dr. Bounpone Sidavong	Chief of Entomology Unit
	Dr. Rattanaxay Phetsouvanh	Chief of Laboratory and Treatment
	Bouakham Vannathone	ACIPAC trainee
Center for Education and Information for Health	Ms. Somchay Phalsena	Director
	Dr. Khamphi Thoun	Staff
Center for Laboratory and Epidemiology (CLE)	Dr. Sihath Insisiengmay	Director
	Dr. Kongmany	Chief of Epidemiology Unit
	Khamphony	ACIPAC trainee
College of Health Technology (CHT)	Dr. Tanoi Srithirath	General Director
	Dr. Somchit Boupha	Deputy Director
	Mrs. Ounheuan Ploualavanh	Chief of Laboratory Section
	Mr. Onkham Savongsy	Deputy Chief of Laboratory Section
	Dr. Viphavank Vylabouth	Chief of Administration
Ministry of Education	Sithath Outhaithany	ACIPAC trainee
Province		
Vientiane PAMS	Dr. Thong Khan	Director
	Dr. Khambay	Sub-director
	Mr. Chansamone	Staff, Epidemiology unit
	Dr. Chanthaleuth	Staff, Entomology unit
Vientiane Health Office	Dr. Thong Lien	Deputy Director
	Dr. Kkam Phiane	Deputy Director
Vientiane Prov. Hinheub Dist. Health Office	Dr. Thongkhoun	Director
Oudomxay PAMS	Mr. Khammy	staff
	Mr. Somphone	staff
Oudomxay Health Office	Dr. Khamphanh Sayavong	Director
	Dr. Phiou Tayboavone	Deputy Director
Oudomxay Prov. Nga Dist. District Hospital(Health Office / DAMN)	Mr. Sichanh	Director
	Mr. Khamphat	Deputy Director
Khammouane PAMS	Dr. Khemphavanh	Director
	Dr. Somchit	Deputy director

	Mr. Xaysana	Chief of Administration
Khammouane Health Office	Dr. Choum	Director
	Mr. Khakco	Chief of Cabinet
Xieng khouang PAMS	Dr. Somsy	Chief
Xieng khouang Health Office	Dr. Bouasone	Director
	Nanthi	ACIPAC trainee
Xiengkhouang Prov. Phoukout Dist. Health Office	Mr. Khamby	Director
	Mr. Kham Chak	Staff, Malaria unit
Donor, NGO, etc		
Population Service International (PIS)	Sythong Nooansengsy	Marketing director, PSI Laos
	Sihamano Bannavong	Communications manager
	Robb Butler	Research Coordinator
	Lhamphon Phanakuone	Technical Health Advisor
World Health Organization (WHO)	Dr. Eva-Maria Christopher	Medical Officer, Public Health/ Epidemiology
	Mr. Pricha Petluang	IEC expert
	Mr. Chonglham	IEC artist
	Dr. Nanna Jurygensen	APO
	Dr. Hauvne Strandgaard	APO
World Bank (WB)	Dr. Sisamone Keola	Director, Project Coordination Unit, MOH
	Dr. Danglam Mahayo	Deputy Director, Project Coordination Unit, MOH
UNICEF	Ms.Ng Shui-Meng	Programme Co-ordinator
	Ms. Maliporn Virachith	Assistant project offier
EU	Dr. John Storey	Long term Technical Advisor
	Dr. Stephane P. Rousseau	European Co-Director
	Dr. Boussay Hongvanthong	Lao Co-Director, Deputy Director, CMPE
KOICA	Mr. Yu, Sa-Sun	Representative
Agent		
Siamdutch (mosquito net)	Mr. Marcel L. Dubbelman	Executive Director
	Mr. Matthieu Challe	Business Development Manager
	Mr. Apichuan Sailomraksa	Factory manager
Akurungaroon (mosquito net)	Mr. Niyom Prasongchaikul	Managing Director
	Ms. Somsri Prasongchaikul	General Manager
	Mr. Pairote Pumaradee	Export Manager
Aventis (insecticide)	Mr. Wichai Chivakanit	Executive Director, General Manager
	Mr. Ittidet Chaimongkol	Sales Manager
	Mr. Pitak Patrapinyogul	Factory Manager