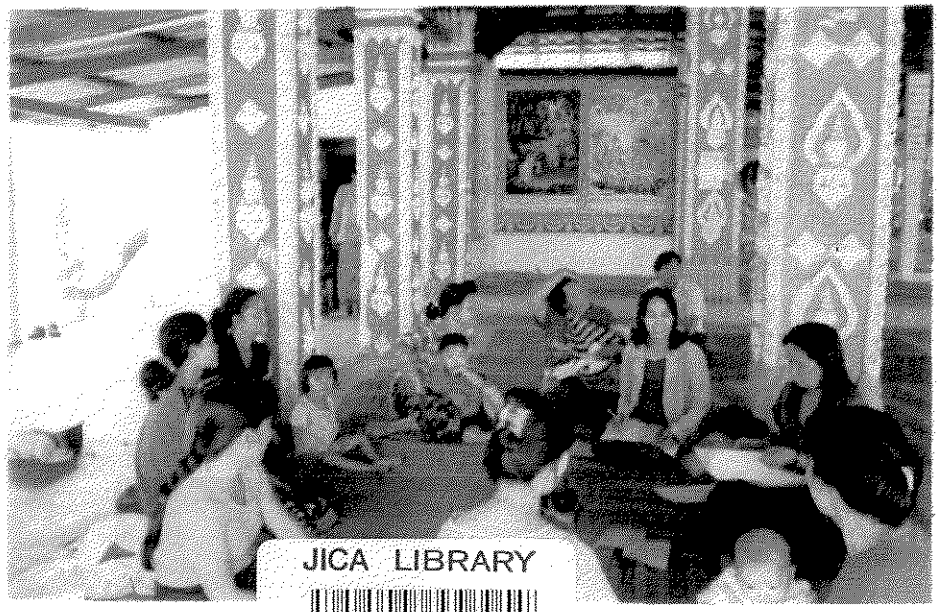
Lao People's Democratic Republic
Peace Independence Democracy Unity Prosperity

Report of Ex-post Evaluation

Pediatric Infection Disease Prevention Project



EDC ENTERPRISE & DEVELOPMENT CONSULTANTS Co., Ltd.

JICA LAOS OFFICE

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LIST OF ABBREVIATIONS

AFP	Acute Flaccid Paralysis
BHN	Basic Human Need
CPS	Champasack Province
DCMC	District Committee Mother and Child Health
DPT	Diptheria, Pertussis and Tetanus
EPI	Expanded Program on Immunization
FIC	Fully immunized coverage
GAVI	Global Alliance Vaccine for Immunization
GIS	Geographic Information System
ICC	Interagency Coordinating Committee
IEC	Information, Education and Communication
IMR	Infant Mortality Rate
JICA	Japan International Cooperation Agency
LPB	Luangprabang Province
LXB	Luxemburg
MCH	Maternal and Child Health
MCHI	Maternal and Child Health Institute
MDGs	Millenium Development Goals
MOH	Ministry of Health
MNTE	Maternal Neonatal Tetanus Elimination
NCLE	National Center for Laboratory and Epidemiology
NCCPE	National Committee for the Certification of Poliomyelitis Eradication
NIHE	National Institute of Hygiene and Epidemiology
NPEP	National Poverty Eradication Program
OPV	Oral Poliomyelitis antivirus
PCHMC	Provincial Committee Mother and Child Health
PIDP	Pediatric Infectious Disease Prevention Project
UNICEF	United Nations Children's Fund
VCMC	Village Committee Mother and Child Health
VTE	Vientiane Province
WHO	World Health Organization
ZZSMS	Zone Zero Social Mobilization Strategy

I. INTRODUCTION

1.1 Project Background

Lao PDR launched a full-scale immunization program in 1982, but could not spread the immunization services throughout the country as originally planned. To assist the Lao government's endeavors, JICA has been supporting the EPI since 1992 as part of the Primary Health Care Project, which focused on conducting the nationwide polio vaccination and establishing the system surveillance for EPI. In addition, the Government of the Lao PDR required the Japanese Government to extend the technical cooperation to further ensure the eradication of poliomyelitis, as well as to prevent measles, neonatal tetanus and other pediatric infectious diseases by taking advantage of EPI activities and the surveillance system. Several study missions were sent to the Lao PDR to discuss the contents of the projects. Finally, the Pediatric Infectious Disease Prevention (PIDP) Project was implemented on 1st October 1998 with mutual cooperation between the Ministry of Health, National Institute of Hygiene and Epidemiology, Mother and Child Health Institute, and the Japan International Cooperation (JICA).

1.2 Project Overview

The project has designed its overall goal to reduce morbidity and mortality from EPI target diseases. The purpose of the project was to strengthen the EPI system with emphasis on surveillance system of EPI target diseases. The details of the PIDP project are as follows:

(1) Overall Goal

Mortality and morbidity from EPI target disease are greatly reduced.

(2) Project purpose

Prevention system for EPI target diseases (except TB) with the focus on poliomyelitis, is strengthened.

(3) Outputs

1) Vaccination by regular "out-reach service (vaccination delivery service)" in villages is improved.

2) Surveillance system for EPI target diseases, especially poliomyelitis (AFP) and measles, is improved.

3) EPI Activities in zone zero (area 3 km from the medical facilities which can provide vaccination) are improved.

4) Cold Chain and Logistics systems are improved.

5) Basic warehouse management, especially for EPI, is strengthened.

6) Awareness and knowledge of EPI by the Laotian people are increased.

(4) Inputs

Japanese side :

Long- Term Experts	6	Equipment	1,005, 841 US Dollars (134 Mil Yen)
Short- Term Experts	22	Local Cost	46 Million Yen
Trainees Received	9		

Lao side :	41
Local Cost	198.8 Million Kip (3 Million Yen)

The project completed its activities in September 30th, 2001. The terminal evaluation was carried out about 4 months before the completion of the project. The evaluation described the results of the project implementation and the achievement based on the 5 criteria, namely efficiency, effectiveness, impact, relevance and sustainability.

In 2004 the JICA Laos Office called for an ex-post evaluation of this project. The results contribute to better informed decision-making based on the lessons learnt, and promote greater accountability. They will be shared with collaborating donors agencies such as UNICEF and WHO, as well as the Ministry of Health (EPI), National Institute of Hygiene and Epidemiology (NIHE = NCLE), and Mother and Child Health Institute (MCHI=MCHC), which are the organizations that received project assistance.

1.3 Study Scope and Objectives

The scope of the ex-post evaluation study was to verify the important issues related to project impact and sustainability as observed three years after the completion of the Pediatric Infectious Disease Prevention Project (PIDP Project). The evaluation will seek answers to the following main evaluation questions:

Impact

1) To what extent has the project's overall goal been achieved since the time of terminal evaluation?
2) What positive and negative impacts have the project had besides what were originally intended?
3) Among positive changes, how has project implementation empowered the target group? Has the project contributed to the improved institutional capacity of the implementing agencies?
4) What negative changes have been brought to the beneficiaries (minority and vulnerable groups)?
5) Are there any factors that influence the achievement of the overall project goal, for instance, some of the cross-cutting issues such as policy, technology, social culture, institutional and management, and economic and financial aspects?
6) Additionally, what are the impacts of the collaboration mechanism among donors (WHO, UNICEF, JICA etc....)

Sustainability

1) How has the counterpart organization been maintaining the activities and output as results of achieving the project purpose and overall goal?
2) How have the outcomes of the project been maintained since the termination of the assistance?

3) What are the factors that contribute to the sustainability of the project outcomes, such as appropriateness of project planning and technology transferred?

4) Are there any factors that influence the achievement of the overall project goal, such as some of the cross-cutting aspects regarding policy, technology, social culture, institution and management, economy and finance?

1.4 Study Team and Study Period

The Ex-post Evaluation Study was conducted by Enterprise & Development Consultants, Co., Ltd. (EDC) with the support of JICA. The duration of the actual interview field survey was 30 days from October 13th to November 11th, 2004.

II. EVALUATION STUDY APPROACH

2.1. Methodology

The evaluation team has used various methods in this study as shown below:

a. Review the existing documents of the project, meeting minutes, the terminal evaluation report of the PIDP Project and other documents related to the activities of this project;

b. Review the annual plan and report of EPI Section and Surveillance of Infection Disease Section;

c. Conduct semi-structured interview focusing on the key informants who were involved in the project. During the field study, the survey and interviews were carried out by the consultant at different levels such as central, local and community level. The key informants were asked about their duties, their work conditions and working system, observations, and checked on logistics and cold chain on EPI and surveillance disease target of EPI. (see schedule of the evaluation survey at each level in Annex 1);

d. Conduct focus-group discussion with mothers.

The questionnaire form for each level was prepared for the following organizations at the central, provincial, district, health center (Khet), and village levels:

- Concerned authorities such as cabinet of the MOH, departments, the center, Department of General Education, Provincial Department of Health, Cabinet of District Health
- Donor organizations
- National, provincial and district EPI managers
- Logistics and cold chains at national, provincial and district level
- Disease Surveillance at national, provincial and district levels
- Vaccinators at all levels of ZZSMS and outreach
- IECH
- Questionnaire form for utilization of radio receptors
- Head or vice head of village
- Head or vice head of Lao Women's Union

- Mothers who have children less than 2 years old

2.2 Implementation

At the central level, the Team Leader interviewed 4 donor organizations, 3 administrators, 2 national project directors of EPI and Surveillance disease, and 1 from the central ZZSMS Maternal and Child Health Hospital.

At provincial level, the study team selected 3 provinces representing the central, northern and southern region. These were Vientiane Province (central), Luangprabang (north) and Champasack (south). In each province, two districts were chosen based on the project areas. One district was within Zone Zero and the other districts were in Zone 2, with exception that in Vientiane province only one district (Thourakom district) was selected. In Luangprabang, the 2 districts that were chosen were Chomphet and Park Ou, while in Champasack, Phonethong and Khong districts were selected. In each district, 2 villages were selected with the Health Centers. The villages include:

- Siboungheua Tai and Boungphao villages in Thourakhom district
- Nongphuk and Houayoone villages in Chomphet district
- Hadkho and Khonekham villages in Pak Ou district
- Houa Khong Tai and Kadan villages in Khong district
- Phonesanh and Ousu villages in Phonethong district

In each province and district, the study team interviewed 1 director or deputy director of provincial or district Health Department, 1 EPI manager, 1 Logistic and Cold Chain manager, 1 Surveillance Disease manager, 1 chief of MCH unit, 1 general educational officer (director or vice) and 1 head or deputy head of LWU (president or vice president). The study team also visited 5 health centers. In addition, the team observed the vaccination being provided in the ZZSMS in Chomphet district and one outreach mobile team in Khonekham village, Pak Ou district, Luangprabang province.

In each village, the study team interviewed the head village or village committee, the head of the Lao Women's Union and conducted focus group discussions with mothers who had children less than 2 years old. In total, 41 key informants were interviewed and 10 focus group discussions were carried out, in which 5 to 10 mothers with children less than 2 years old voluntary participated.

III RESULTS OF THE EVALUATION

3.1. Impact of the Project

3.1.1 Policy Aspects

3.1.1.1 National Policy on EPI

The National EPI Policy from 2001 and 2002, which stated that the national immunization coverage for BCG, measles, DPT3, and OPV3 is 85 % and ATT2+ -50 %, remained the same.

The National Policy from 2003 was changed and aimed to achieve fully immunized coverage (FIC) of 55 % in children reaching their 2nd birthday and by achieving coverage of at least 2 doses in 40 % of women of childbearing age. Specific antigen coverage targets for children were BCG- 70 %, DPT3-60 %, OPV3-60% and measles-55 %. The EPI expanded introduction of DPTHb to at least 7 additional provinces (to 3 provinces in 2002, 11 in 2003 and 18 in 2004).

In addition, the National Policy sustained free polio-free status, approved Maternal Neonatal Tetanus Elimination (MNTE), and accelerated the Measles Control Plan of Action.

3.1.1.2 Policy of Donors

JICA currently supports the EPI by providing vaccines, logistics and cold chain. The policy of UNICEF is to reduce the infant morbidity and mortality by improving the coverage of vaccination. They are a member of the ICC and Technical Working Group and member of the NCCPE.

WHO's technical cooperation from 1998 to 2004 has not changed. They have assisted in developing annual, quarterly and five-year work plans. They also provided technical assistance with short and long-term consultants and in developing guidelines. In addition, they are a member of the ICC and Technical Working Group and member of the NCCPE. They also financially supported local costs and supplied equipment every 2 years and followed up disease surveillance of the 7 target EPI diseases.

Because GAVI did not have any representative in Lao PDR, they gave the authority to the ICC and TWG for making decisions. They provided a budget in order to increase the coverage of immunization and safety box injections.

The only organization that has changed their policy is AUSAID. It currently emphasizes human resource development, education programs, economics, marketing and trade. Its technical support to the EPI finished in June 2003.

Impact of collaboration mechanism among donors

The study team interviewed donor organizations such as UNICEF, WHO, GAVI, AUSAID, and revealed that they work according to the policy, the role and functions of their agencies. They also show their satisfaction with the multilateral cooperation.

The good collaboration mechanism among donors that the Project established still works and continuously improves. The International Coordinating Committee (ICC) has members from the MOH, the minister or the vice minister, head of Department of Hygiene and Prevention, NCLE, MCHC, EPI section, Surveillance, as well as JICA, WHO, and UNICEF. They meet every three months for the quarterly report and planning.

The Technical Working Group is the same group of ICC. Regular meetings are organized monthly and special meetings are held when there are emergent problems.

3.1.2 Technology Aspects

The national EPI introduced the new vaccine Hb0 to vaccinate children at birth and Hb into the DPT. The introduction of the new vaccine contributed to the increase of specific antigen coverage targets of vaccination. There are 7 EPI target diseases that could be prevented by vaccination. In addition, vaccination leads to healthy children and improves their immunity status against the 7 aforementioned diseases.

The introduction of safe injection methods to routine immunization includes the use of sterilized needles and sterilized syringes. Auto-disable syringes reduce the potential risk of getting infections after vaccination. In addition, GAVI introduced the safety box injection for safe destruction of syringes and needles. In each province, there is a burning generator for AD syringes, and the outreach mobile team has to bring back the safety box injection and destroy it in the province.

Finally, a new strategy on micro planning, in which the bottom level has to prepare their plan by themselves in order to increase immunization coverage of different types of antigens, was introduced and developed by UNICEF.

Positive impact:

The technology/techniques introduced by the project included: mass campaigns for the elimination of Poliomyelitis, establishing GIS on EPI/Surveillance on AFP and measles improving EPI services in Zone Zero, and improving cold chain, logistics, and IEC materials.

In addition, the new technology that was introduced by the project were a vaccine for Hepatitis B within the DPT (called "DPTHb"), new AD syringes for safe injection, safety box and waste disposal transportation, generator for burning AD syringes and micro planning. These technologies are still in use.

Negative impact:

Some technologies stopped after the Project, including the mass campaigns for the elimination of Poliomyelitis. This was due to the WHO certification of Poliomyelitis Eradication. In addition, the GIS was replaced by hand mapping, and ZZSMS combined with EPI, giving more responsibilities to the district EPI managers.

3.1.3 Environmental Aspects

There are no negative environment aspects from the EPI activities because the method for safe injections, using one sterilized syringe and needle for each injection, (AD) has been followed. The AD in the safety box is then burnt in the incinerator at provincial level.

3.1.4 Socio-Cultural Belief and Behavior of Mothers

Before the EPI program, some mothers had incorrect behavior such as not bringing their children to be vaccinated and thinking that their children were already healthy and didn't need it. Or, after the immunization, the children got fevers and the mothers couldn't work. This belief has gradually changed over time.

After the project ended, there was a positive change in awareness and behavior of villagers toward EPI. The roles of women in family and society increased, particularly in taking care of the family and children. Women know how to deliver health education on EPI and surveillance of target diseases of EPI, especially Poliomyelitis and Measles, to other women in their village.

However, the Laoloum women have more knowledge on the importance of vaccination than the Lao Soung and Lao Theung as shown in the focus group discussions.

3.1.5 Institutional and Management Aspects

3.1.5.1 Morbidity and Mortality Rate from EPI Target Diseases

There is a good system of disease surveillance from the central to the grassroots level. When there is an outbreak in the village, the health workers inform the health center, then the health center informs the epidemiology unit of the district health office by telephone or radio receptor. The

information is then checked again by the district team and the provincial epidemiology unit. If it is a positive diagnosis, the provincial epidemiological unit informs the central level by phone or fax.

The disease surveillance activities are performed well, evidenced by the fact that there were no epidemics of target EPI diseases during the past three years. There were only sporadic cases of target EPI diseases and no Poliomyelitis cases (See Table 1).

Overall, the morbidity and mortality rates from EPI target diseases have been reduced through the disease surveillance established by the project.

Table 1: Morbidity and Mortality from EPI target diseases nationwide

Diseases	Province		2000	2001	2002	2003
Acute Flaccid Paralysis	National	Cases	71	55	79	73
		death	0	0	0	0
	Vientiane	Cases	9	4	1	4
		death	0	0	0	0
	Luangprabang	Cases	9	17	13	17
		death	0	0	0	0
	Champasack	Cases	3	6	7	6
		death	0	0	0	0
Measles	National	Cases	331	91	2070	1810
		death	2	1	22	8
	Vientiane	Cases	8	5	387	128
		death	0	0	0	0
	Luangprabang	Cases	24	9	184	155
		death	0	0	6	0
	Champasack	Cases	9	6	9	9
		death	0	0	0	0
Diphtheria	National	Cases	3	2	40	24
		death	1	1	6	10
	Vientiane	Cases	0	0	2	7
		death	0	0	2	1
	Luangprabang	Cases	0	0	2	0
		death	0	0	1	0
	Champasack	Cases	0	1	0	0
		death	0	0	0	0
Neonatal Tetanus	National	Cases	21	17	16	18
		death	5	8	3	1
	Vientiane	Cases	5	1	0	2

		death	0	0	0	1
	Luangprabang	Cases	0	0	0	0
		death	0	0	0	0
	Champasack	Cases	0	0	1	0
		death	0	0	0	0
Pertussis	National	Cases	80	111	61	200
		death	0	0	0	0
	Vientiane	Cases	5	0	0	43
		death	0	0	0	0
	Luangprabang	Cases	5	1	3	4
		death	0	0	0	0
	Champasack	Cases	0	4	0	8
		death	0	0	0	0

Source: 2000-2001, 2002-2003 Annual Reports of Disease Surveillance Section, National Centre for Laboratory and Epidemiology, Ministry of Health

3.1.5.2 Staffing and Training:

Positive impact

The number of staff working at the central EPI increased from 23 to 25 from 2001 to 2003 (Table 2). Staff that had been trained during the project continued to work in the EPI activities effectively. The number of EPI staff has increased, particularly the number of MCH staff at the district level.

At the MCH Provincial Health Department, there are 2 to 4 staff working at the EPI and 3 to 5 staff working for MCH. In addition, there are 14 to15 staff working at the MCH section within the provincial hospital. However, despite a low turnover rate of MCH staff at the provincial level in Luangprabang and Champasack province, there is a high turnover rate in district EPI management. At the district level, there are 1 to 2 EPI staff and 4 to 5 MCH staff at district health office and District hospitals.

There were training courses on the new vaccine DPTHb in 2003, logistic and cold chain in 2002, and EPI management in Khon Kaen, Thailand in 2003-2004. 32 vaccinators at the health centers have not been trained yet.

Overall, the EPI staff gained their skills on EPI management during the Project and continued to apply their skills in their EPI activities. However, only few trainings were organized after the project ended due to limited budget.

Table 2: Number of staff of EPI and MCH at central, provincial and district levels

Province	2001				2002				2003			
	EPI Prov	EPI dist	MCH prov	MCH dist	EPI Prov	EPI dist	MCH prov	MCH dist	EPI Prov	EPI dist	MCH prov	MCH dist
EPI Section, MCH Centre	23	N/A	N/A	N/A	24	N/A	N/A	N/A	25	N/A	N/A	N/A

Vientiane	2	22	2	35	2	22	2	35	2	22	2	35
Luangprabang	4	38	17	42	4	36	16	40	4	38	14	41
Champasack	6	23	8	29	6	24	7	29	5	25	7	39

Source: 2000-2001, 2002-2003 Annual Reports of EPI Section, Mother and Child Health Centre, Ministry of Health

Negative impact

There was some staff at the central EPI, such as from the planning and administrative sections, which were trained in GIS. However, these staff, who was also trained in EPI management, have since resigned from EPI, and the new staff has not yet been trained.

After 2001, there were few trainings due to limited funding. The donor agencies proposed for EPI to carry out on-site training when staff went to supervise in the field. Since 2001, despite a few trainings on introducing the DPTHb (2002), logistic and cold chain (2002) and EPI management in Khon Kaen (2003-2004), about 72 district EPI staff have not been trained on EPI management and 1100 vaccinators have not been trained yet.

At the district level, staff turnover is relatively high. Overall, the number of staff at every level, particularly at the district level, is not enough.

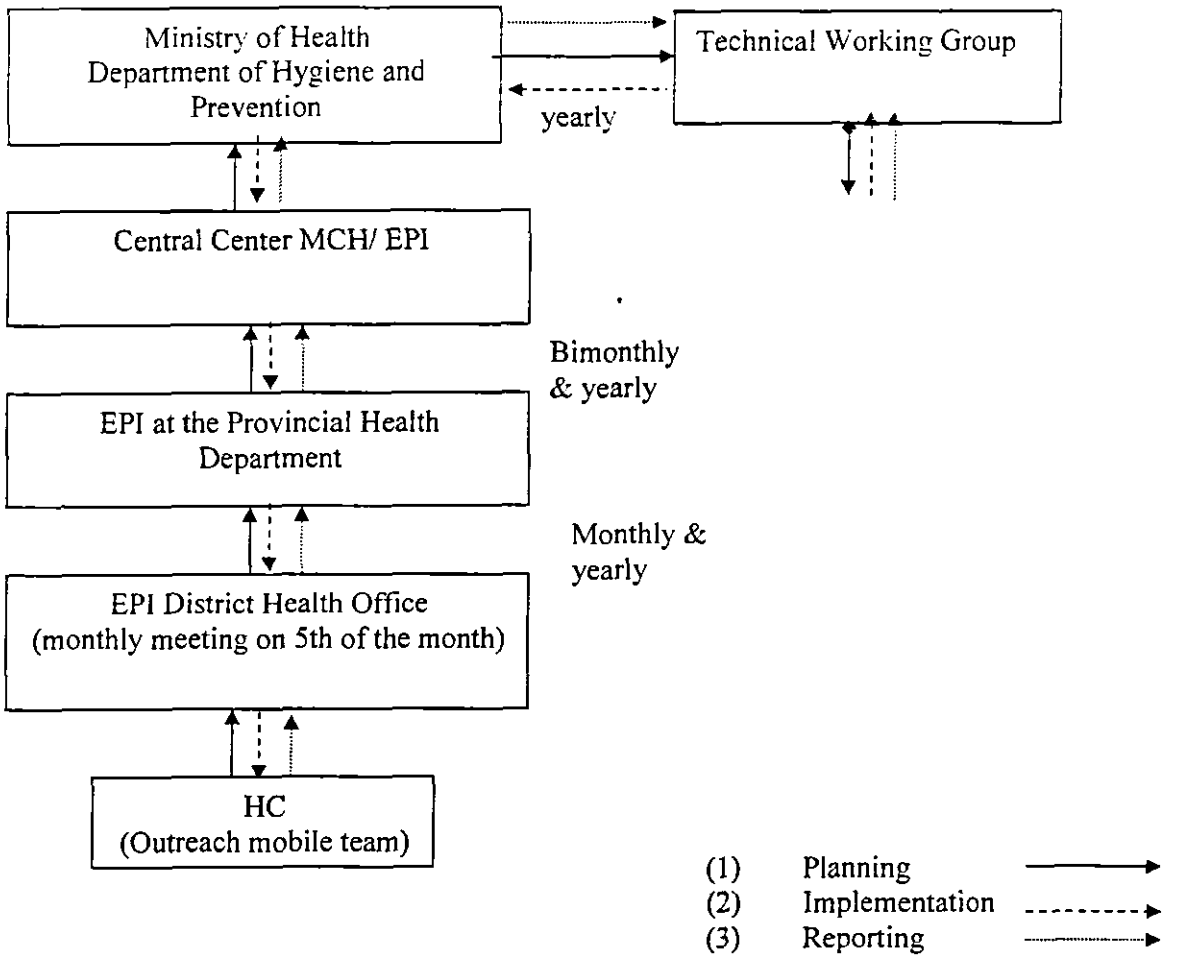
3.1.6 Vaccine Ordering Procedure

The vaccine ordering procedure is done once per year at central level based on the yearly needs of vaccine for target population of each province. The national EPI calculated the annual requirement of vaccines based on the target population, numbers of waste, the actual number used in the previous year, and the drop-out of 25%. At the end of the year, the national request was submitted to ICC and Technical Working Group and to partner agencies. It took about 1 month to get the vaccine supply.

The provincial EPI manager calculated the amount of required vaccines based on the estimation of the target group, EPI formula and waste of 10%. The provincial EPI manager usually submitted the request once every 2 (even) months. In case there was not enough stock in the province, the provincial manager submitted the request in the odd month. In addition, the provincial manager also submitted the annual request of vaccines during September-October.

The district EPI manager calculates the vaccine requirement based on the estimation of the target group, EPI formula, waste of 10%, and the actual amount used in the past month. The request is then submitted every month to provincial EPI. In regards to annual vaccine plan, the district EPI manager submits the annual plan of vaccine requirements to the provincial EPI manager in August (see Figure 1).

Figure 1: Flow Chart of Vaccine Ordering from Bottom Up



The Figure above shows that when the central EPI section receives the vaccines, equipment and operational funds from donor agencies, it informs EPI at provincial level to come and get it. This takes 3 days to 1 week after the submission of the request. The means of transportation is either by air or by road and is up to the provincial EPI. After that, provincial EPI informs the district EPI manager to come and get the supply once per month. This takes 1-3 days after the submission of the request. The ZZSMS at each level requests vaccine once every 15 days or 1 month. The outreach team makes requests for vaccines once a quarter (or 1 round). The implementation must be completed from 15 days to up to 1-1.5 months, depending on the target population and the condition of the transportation. After that, the district EPI asks the health center to submit the vaccine request once per immunization service session and implementation takes about 1-2 weeks.

The reporting is done from bottom up. There are regular monthly meetings at the office of district health (EPI). All health centers submits their monthly report and the plan of the following month on 5th of each month. The district EPI sends the report to provincial EPI 1 week after the meeting. The provincial EPI has its monthly meetings on the 12th and sends the report to central EPI on the 15th. After that, the central EPI sends the reports to the Department of Hygiene and Prevention on the 20th. ZZSMS at all levels prepares monthly reports while the outreach team prepares a report which documents the administrative, technical and financial implementation of each round of immunization, and sends it at the end of the last month of each quarter or round.

Overall, the waste of vaccines from the outreach mobile team is high compared to the one in ZZSMS. The MCH at the provincial and district hospitals also has a high level of waste of vaccines. Because of this, the central EPI ordered them to make appointments with mothers to get vaccinations once per week or once per month based on the actual number of target population coming for vaccination each day at the clinic. The vaccine ordering procedure was formulated and implemented through the project and continued to work effectively after the project.

3.1.7 Economic effects on production and family income

The immunization of 7 communicable diseases, which could be prevented by immunization, contributes to increase of family income. According to the focus group discussions with mothers, during the past three years their children have been healthy. As a result, the mothers have not had health care expenses and have not lost working time.

There is a trend of increasing household income both in government and private sectors. According to the discussion with the mothers, because their children have been healthy in the last three years, they have not had health care expenses and can concentrate on their work.

3.2 Sustainability of the Project

3.2.1 Policy Aspect

The Lao government considers that maternal and child health care and EPI are the first priorities of global health and allocates the annual budget for these activities. In the National Growth and Poverty Eradication Strategies (NGPES), the EPI was stated as priority work in the Health-Related Millennium Development Goals (MDGs). The fourth goal in the MDGs is to reduce child morbidity which was measured by indicator 14- proportion of 1 year old children immunized against Measles. Similarly, in Chapter 3 on Poverty-focused Health Development Plan: Policy and Investment Priorities Strategic response: Immunization (EPI) for Women and Children, it is suggested that immunizations have consistently been shown to be one of the most cost-effective health interventions. Conditions preventable by vaccines are more common among the poor while at the same time the poor are often the group most difficult to reach with immunization services. From 2003 to 2005, special efforts will be made by the government to achieve 85% vaccination coverage of mothers and children in rural areas. Priorities include supplemental immunization, National Immunization Day for Measles vaccine, introduction of Hepatitis B into the routine vaccination, and better coordination, supervision and monitoring of MCH.

The actual expenditure of the Lao government on the EPI program increased steadily from 2000 to 2003 with a big investment in construction in 2002 and 2003. The salary expenditure of the EPI staff has also steadily increased, which might be due to an increase in the number of EPI staff. On the other hand, it could be a salary raise for the government staff. The budget for gasoline also increases due to the increasing price of gasoline. However, except for gasoline costs, the total budget went down in 2004. In the first quarter of 2005, the government made a special investment, which is three times more than the budget in 2004. This includes 730,000,000 kip for the construction of a new building of the MCH Center. However, generally speaking, the government budget is still very low, resulting in limited implementation of many activities of each project.

Table 3: Annual Expenditure for EPI from 2000 to 2004 and Budget for 1st quarter of 2005

EPI	2000	2001	2002	2003	2004	2005 (approved budget for 1st quarter)
Total budget	*43,992,949*	*157,829,954*	*454,127,275*	*554,823,268*	*307,806,275*	*1,013,268,690*
1. Salary	28,157,949K	39,849,954K	50,407,275K	55,223,268K	50,407,275K	81,168,690K
2. Gasoline	10,435,000 K	63,280,000K	35,870,000	72,500,000K	122,119,000K	113,100,000K
3. Office utilities	2,400,000K	18,500,000K	16,420,000	19,500,000K	27,700,000K	20,000,000K
4. Medical equipment	2,500,000K	25,000,000K	25,000,000	15,000,000K	68,300,000K (combined	59,000,000K (combined
5. Maintenance		34,700,000K	32,100	59,000,000K	n; 4, 5)	n; 4, 5)
6. Electricity/Water supply	Included in MoH budget	Included in MoH budget	Included in MoH budget	Included in MoH budget	21,000,000K	N/A
7. Protocol expenses	500,000K	1,500,000K	1,200,000	1,200,000K	1,200,000K	N/A
8. Construction (MCH building)	N/A	N/A	330,000,000	332,400,000K	7,000,000K	730,000,000K
9. Communication	Included in MoH budget	Included in MoH budget	Included in MoH budget	Included in MoH budget	10,000,000k	10,000,000k

Source: Annual Budget Reports (from 2000-2005), Finance Section, Department of Planning and Budgeting, Ministry of Health

Certification of Poliomyelitis

The policy of the Surveillance Diseases target of EPI, particularly Acute Flaccid Paralysis and Measles, is the priority of the health sector because the 7 diseases that could be prevented from vaccination have severe health consequences. The Surveillance Disease section is responsible for collecting information on the incidence of outbreak of 18 diseases, especially 7 target diseases of EPI, and investigating the outbreak in order to prevent it in time.

The National Committee for Certification of Polio Eradication normally meets once per quarter with WHO, who collaborates with the regional WHO committee for Polio Eradication. In the past three years, there have been no cases or deaths from Poliomyelitis. However, because the risk of infection of Poliomyelitis from outside the country still remains, the EPI needs to continue prevention by implementing polio vaccines in high risk villages, and those near borders (See Table 3).

Overall, verification of the prolongation of the Certificate of Poliomyelitis Eradication at the National Committee for the Certification of the Poliomyelitis Eradication is still effective.

Table 4: Number of Cases and Deaths from Polio in 2000 and 2003

Type	Level		2000	2001	2002	2003
Polio	National	Cases	0	0	0	0
		Death	0	0	0	0

	Vientiane	Cases	0	0	0	0
		Death	0	0	0	0
	Luangprabang	Cases	0	0	0	0
		Death	0	0	0	0
	Champasack	Cases	0	0	0	0
		Death	0	0	0	0

Source: 2000-2001, 2002-2003 Annual Reports of Disease Surveillance Section, National Centre for Laboratory and Epidemiology, Ministry of Health

3.2.2 Sustainability of PIDP Project Outputs

3.2.2.1 Outreach Mobile Team and ZZSMS (Output 1 and 3)

EPI Vaccine Coverage for Different Antigens

The study team reviewed the statistical data from the terminal evaluation in 2000 and data during the period 2001-2003 from the central EPI, provincial and district levels (See Table 5). As indicated in Table 5, the EPI vaccine coverage for different antigens has slightly improved. There was a decline in the coverage of OPV3, Measles and TT2+ from 2001 to 2003, which was probably due to insufficient funds. For instance, calculation of budget for traveling, especially gasoline, was inadequate due to high inflation of gas prices over the last three years. In addition, per diems were calculated as $2.8 per village and per team without consideration of the number of working team and distance between villages. In addition, because there was a high turnover of EPI staff, the new staff lacked recording and reporting skills. Other factors included the big difference between the actual and estimated number of target population for vaccination, lack of vaccinators, and lack of transport for the outreach mobile team.

Table 5: Distribution of EPI Vaccine Coverage for Different Types of Vaccines (in %)

Vaccines	Provinces	2000	2001	2002	2003
Bacteria of Calmette and Guerin (BCG)	National	**58**	**58**	**67**	**63**
	Vientiane	54	45	67	45
	Luangprabang	73	69	72	83
	Champasack	58.7	66.9	74	75
Diptheria, Pertussis, Tetanus (DPT3)	National	**52**	**47**	**54**	**59**
	Vientiane	57	41	65	35
	Luangprabang	61	45	50	37
	Champasack	10.9	10.4	12	10.0
Oral Poliomyelitis Vaccine (OPV3)	National	**57**	**52**	**57**	**51**

	Vientiane	57	41	65	35
	Luangprabang	61	45	50	37
	Champasack	53	47.9	54.8	55
Measles (in children less than one year old)	National	**60**	**72**	**43**	**41**
	Vientiane	60	39	55	45
	Luangprabang	84	56	78	76
	Champasack	52	34	60	53.9
Tetanus Toxin in pregnant women (TT2+)	National	**37**	**33**	**41**	**36**
	Vientiane	61	33	47	31
	Luangprabang	44	44	46	46
	Champasack	12	42	42	40
Tetanus Toxin (TT2+) (in women of reproductive age: 15-45)	National	**56**	**33**	**41**	**38**
	Vientiane	40	21	61	21
	Luangprabang	63	83	37	61
	Champasack	15	33	43,8	32

Source: 2000-2001, 2002-2003 Annual Reports of EPI Section, Mother and Child Health Centre, Ministry of Health

ZZSMS and Outreach Mobile team

There are two types of ZZSMS, namely Zone Zero Social Mobilization Strategy (providing services at the hospital), and Zone Zero Social Mobilization (the MCH staff who go to the village to vaccinate children). The MCH section is responsible for immunization at the ZZSMS.

The organization for ZZSMS at the central, provincial and district level is similar. However, because the ZZSMS was integrated with EPI in 2000, the study team could not get the statistical data for ZZSMS from 2001 to 2003 because the provincial EPI reports the overall coverage of immunization without breaking down the statistics of ZZSMS and outreach mobile teams. Normally, the outreach mobile team went to the villages 4 times per year, however, in 2003, the fourth round was delayed for 1 month.

The total population, coverage areas and target people vaccinated for the outreach mobile team and ZZSMS team is showed in Table 5 and 6. It was found that the number of outreach villages has steadily increased, most likely because some international funding agencies still continue support to EPI activities, which is the priority work of the MOH. However, the number of villages covered by ZZSMS has declined.

Table 6: Distribution of Coverage and Target People Vaccinated by the Outreach Team

Outreach Team :	Villages number	Population number
2000	11,695	3,856,600
2001	11,754	4,903,969
2002	11,754	4,699,342
2003	12,088	4,534,950

Source: 2000-2001, 2002-2003 Annual Reports of EPI Section, Mother and Child Health Centre, Ministry of Health

Table 7: Distribution of coverage and target people vaccinated the ZZSMS

ZZSMS	Number of Villages	Population
2000	843	588,536
2001	946	1,115,019
2002	889	476,081
2003	762	609,217

Source: 2000-2001, 2002-2003 Annual Reports of EPI Section, Mother and Child Health Centre, Ministry of Health

3.2.2.2 Surveillance System (Output 2)

The reporting system is a bottom up process. For instance, the staff of the district epidemiology unit reports about the disease surveillance weekly to the provincial epidemiology section. Then the provincial level reports to the central Disease Surveillance. The weekly surveillance report was mostly done completely, and on time. The district epidemiology also reports to the provincial epidemiology on a monthly basis, and then from the provincial to the central level. The majority of epidemiology staff mentioned that they report to the central level weekly, on time, and completely (Table 7).

Table 8: Percentage of Completeness and Timeliness of Weekly Report from Province

Year	Completeness	Timeliness
2000	94	86
2001	94	87
2002	94	69
2003	16	89

Source: 2000-2001, 2002-2003 Annual Reports of Disease Surveillance Section, National Centre for Laboratory and Epidemiology, Ministry of Health

3.2.2.3 Cold Chain and Logistic System (Output 4)

The cold chain is performed at all levels according to the standard. For instance, the control of the freezer temperature is recorded twice per day, in the morning and the evening. From the central level to the service delivery level, the management of vaccines is based on 10 criteria. The stock-out of vaccines at provincial and district level continues to decrease. The vaccines vial monitor also follows the standard well.

3.2.2.4 Warehouse Management (Output 5)

There are 2 types of warehouses, namely freezer with temperature 0- -20C and cold room with temperature 0- +15C. In addition, there is an alarm system for controlling the temperature when the temperature is not kept at a standard level. A committee was established to supervise and resolve this matter. The cold room has 3 machines, 1 of which is in stock and another 2 are under operation. Each machine has to stop for one week per month. The freezer is running with 4 machines. Each machine stops 1 week per month and 3 machines are under operation. When the machine is broken, the emergency cooling machine will replace it immediately.

It is observed that the management of warehouse has continued to follow the 5S radar chart since 2000. The inventory update is conducted twice per year. There was no difference between stock according to the ledger and actual stock in the warehouse.

3.2.2.5 IEC (Output 6)

The EPI staff conducted health education on the importance of immunization, the schedule of vaccinations, the time and place of delivery, and the effects after the vaccination to the mothers before immunization. However, some EPI staff provided health education to mothers individually or in groups depending on the condition. The health education was superficial and they did not emphasize the severe consequences and what diseases could be prevented from vaccination. Some mobile teams did not bring the flip chart to demonstrate to the villagers.

The NCMCH and his secretariat team were responsible for resolving problems that the outreach teams face with the vaccination or when the mothers did not understand. The LWU also supported the immunization program at all levels by providing campaigns to mothers with children less than 1 year old, and women at reproductive age. In addition, the LWU is a member of the Commission and takes an active role in supporting activities. The LWU also integrates campaigns on vaccination into their routine work and disseminates information on immunization in their monthly meeting.

The head of each village and village health workers (VHW) deliver health education on EPI through mass media at the meeting at the office of village. In some villages, they organize special health education campaigns 1 hr/time/week from 5.00-6.00 a.m. and talk to the target mothers without IEC material.

The General Education Department and sections at the provincial and district level provided advocacy on vaccination through the pupils to inform their parents to bring their children, women at reproductive age 15-45 years, and children less than 3 years old, in the crèche to vaccinate.

It was found that there were not enough IEC materials at the HC and village levels. Some outreach teams did not have any flipcharts for illustration to the people.

3.2.3 Institutional and Management Aspects

3.2.3.1 Organizational Structure of EPI

The organization structure of EPI changed after the project ended. Since 2000. the EPI has integrated with MCH from central to district level. The national EPI activities at all levels are under the overall supervision of the national EPI manager.

At the provincial level, MCH and EPI were combined together and are now called MCH and EPI section. The EPI manager is responsible for overall EPI activities, cold chain and logistics. The head of the MCH section at Provincial Health Department was in charge of MCH activities; however the provincial hospital is responsible for providing vaccination ZZSMS. The MCH at central and provincial levels provides immunization to the whole population, not just to the target population within Zone Zero. For instance, in Vientiane and Champasack provinces, the EPI manager is responsible for EPI and the head of MCH section at the Provincial Health Department is in charge of MCH and EPI ZZSMS. However, in Luangprabang, the head of the Luangprabang provincial MCH is responsible both for EPI (EPI manager) and MCH. Recently, the provincial MCH handled over ZZSMS to provincial EPI.

At the district level, EPI is combined with the MCH as at the provincial level. There is one or two staff working in the EPI in the districts (Thourakhom, Chomphet, Pak-Ou, Phonethong and Khong), so the district EPI manager is responsible for both EPI activities, including ZZSMS, mobile outreach activities, logistic and cold chain.

The chief of MCH unit at the district level was in charge of providing immunization services at the district hospital. The main duty of MCH is to examine children's health, vaccination, antenatal care (ANC), post natal care and birth spacing, nutrition, breastfeeding, ARI and Diarrhea. Their monthly and annual summary on the number of children that have been vaccinated is then sent to the district EPI manager. The MCH unit at the district level is responsible for ZZSMS. However, the MCH at the district hospital provided immunization for Zone Zero and reported to the MCH district health office and district EPI.

3.2.3.2 Technology Aspects

The technology that the Lao side received during the project such as the surveillance disease, the program on AFP, and database for vaccine management are still in regular use. The organizational functions of EPI ZZSMS in Chomphet district are still effective. Despite the fact that the organization has limited budget to do health education in the village, it could extend the activities to 4 new villages in 2004. The management of vaccines follows the standards of 5 S radar at the warehouse, and there is an automatic control of the temperature. When there are abnormal temperatures, there is an alarm, and the problem is resolved in time. At the central level, the temperature is checked twice a day - in the morning and in the afternoon, before leaving the office, and is recorded on a form. When the cold chain does not work, the vaccines are kept in the cold box covered by ice bags. The vaccine carrier is used to give vaccine vial multi dose proper diluents. Vaccines are used by the fix team or outreach team in the hospital or in the village. The management of vaccines follows 10 criteria.

The annual vaccines needed by the central EPI staff are calculated by multiplying the total number of the target people estimated (or the total quantity of vaccines used in the previous year) by 1 dose /person by 25% vaccine waste and dividing by number of dose in 1 flacon or 1 ampoule. At district level this formula is used: total number of target people estimated (total quantity of vaccine used in the previous month) x 1 dose of vaccine/person x 10% of vaccine waste divided by number of doses of vaccine in 1 flacon or 1 ampoule. There are currently no expired vaccines at the central

level except ATT vaccine which was ordered for the national MNTE but not used. There are 95,000 doses, the same quantity as the regular annual requirement, and the average use is 50%. There is the diminution of the vaccine stock-out at the provincial level.

The GIS program was not in use because a special key was needed for each computer. The price per unit is $1,200 US, so a change to hand maps was made in each program. The introduction of the new vaccine Hepatitis B in 2002 was covered nationwide in 2004. The safe injection with AD syringes and sterilized needles for 1 injection is used and the waste in the safety box is burned in the incinerator at provincial level.

The micro-planning training, which is the training for health staff at district and health center for the planning, budgeting, and EPI management, from bottom up, is still put in practice.

3.2.3.3 Reporting System

The coverage of EPI was reported from provinces to central EPI. The EPI district reported to EPI province monthly. The provincial EPI manager is responsible for vaccinations, cold chain and logistics and developed the annual work plan and submitted it to the national EPI. Similarly, the district EPI manager is in charge of developing the annual work plan of their district and submitting it to the provincial EPI.

The MCH section of the Provincial Health Department is responsible for ZZSMS and reports about the coverage of immunization to the central EPI. The head of MCH section at the provincial hospital is responsible for reporting to the provincial EPI. The district MCH at the district health office and hospital for ZZSMS reports to the provincial EPI manager.

3.2.3.4 Logistics and Supply

During the project, the annual work plan and budget plan were prepared at the provincial level under increasing support of JICA and UNICEF. Some provinces and districts received medical equipment such as baby scales, tongue depressors, absorbent wool and IEC materials from the project.

After the project ended, the MCH at all levels did not develop any annual plan for vaccination at the ZZSMS. However, the EPI at each level developed the annual plan particularly for the requested amount of vaccines. The MCH at all levels did not receive the new medical equipment and IEC materials. However, they have basic facilities for the EPI service at the ZZSMS. They received some document shelves, computers, and photocopy machines.

For the sharps disposal and safe injections, at the district level, the sharps disposal was carried out according to the standard. However, in Luangprabang province, particularly in Chomphet and Pak-Ou districts, the standard of the safe injection was not followed. For example, the number of syringes put in the safety box was not marked.

3.2.4 External Funding for EPI

The national EPI activities heavily depend on donor assistance. Most of the funding comes from JICA, UNICEF, WHO, GAVI, BHN and LXB. The financial support from external agencies continues to decrease and the government of Lao PDR has to contribute a certain amount to the national EPI activities.

The Lao government approved a contribution of about $40,000 to the EPI program to build a new warehouse and office, $3000 for transporting vaccine supply, and $20,000-$40,000 to purchase vaccines in 2004. In other words, the government contributes about 10 percent of the total amount of the EPI program.

Table 9: Comparison of funding from donor agencies during 2001-2004

	2001	2002	2003	2004
UNICEF	$22.771	$344.313	$308,018	$186,018
WHO	$125.771	$100.729	$114,237	$12,497
GAVI	N/A**	$22,599	$117,788	$166,716
JICA	$507,435	$312,000	$384,869	$3,313,3
BHN	$58,588	$42,437	$30,557	$63,281
LXB	$5,320	$3,996	$6,636	$1,622

Note: Amounts in US dollars **GAVI's support started in 2002

Source: Annual Budget Reports (2001-2004) of EPI Section, Mother and Child Health Centre, Ministry of Health

3.2.5 Socio-cultural and Environmental Factors

Generally, there are no negative socio-cultural practices that hinder the continuation of the EPI activities in the villages. However, there are some ethnic minority groups that did not understand the importance of vaccinations. For example, after the vaccination, sometimes children get fevers, and the mothers can't work.

It was observed that there was no negative impact on the environment because the EPI had introduced the safety box, injections and the burning generator. Each mobile team has to bring the safety box back to the provincial EPI and get some rewards. The EPI at provincial level is responsible for burning the needles that were collected from the mobile team from each district.

3.3 Conclusion

Overall, the project has made more substantial positive impacts than negative ones to the EPI program in Laos. The project results still continue within the program to a certain extent. The following part summarizes the situation of the EPI program from 2001 until now, including what has been done, current constraints and suggested actions to be taken in order to overcome the constraints.

The Outreach Mobile Teams continue to provide immunization to the villages and at MCH clinics and have started developing micro-planning for the district mobile team and health centers. Their major problem is the delay of outreach services in villages due to late reporting from the villages, late budget transfers and insufficient funds. Due to the high staff turnover and the disagreement on the training approaches between the EPI and donors, the few trainings that had been organized were not sufficient to maintain the quality of the services. In addition, monitoring of the EPI activities were not regularly done due to shortage of budget. Thus, the team would like to make several recommendations in order to solve these problems: 1) Reporting and budget transfer should be on time; 2) In-service training and refresher training should be organized for the EPI staff; 3) All

lists of the immunization targets for the mobile outreach team should be developed nationwide; 3) Regular monitoring and supervision of the outreach mobile team should be conducted.

The second output, the Surveillance System, has continued to run since the PIDP Project. The weekly surveillance reports are being prepared on time and are complete. Immediate investigation of high-risk Acute Flaccid Paralysis (AFP) and outbreak investigation are carried out. However, the quality of data in the report was not reliable and there is no database even at the provincial level. After the PIDP, the training on EPI/Surveillance and production of IEC materials on EPI/Surveillance was not performed due to shortage of budget. In addition, monitoring and supervision were not regularly done and depend on the government's limited budget. Some suggestions from the team are: 1) Quality of report data should be improved by providing training on basic skills of statistics and epidemiology to provincial and district epidemiology staff; 2) Regular supervision and monitoring of the epidemiology activities should be carried out continuously in order to prevent the outbreak; 3) Disease surveillance of the 7 target EPI diseases should be done continuously to prevent effectively against outbreak; 4) Database of the disease surveillance should be established at the provincial level.

In relation to the output of 3-EPI services in ZZSMS, the immunization at the Zone Zero was conducted by the MCH staff. They also provided IEC events at the MCH clinics and villages. However, since the MCH was integrated into EPI in 2000, all the immunization coverage was combined together with the outreach mobile team. The ZZSMS started doing their micro-planning in order to improve the vaccination coverage by developing the list of the target immunization. After the end of the PIDP, the ZZSMS did not receive any supplies and equipment, including IEC materials. The team would like to suggest that: 1) The lists of the target population for vaccination nationwide should be developed and updated every year; 2) IEC materials should be reproduced and distributed nationwide. In addition, the establishment of IEC events in the villages and the MCH clinics should be strengthened; 3) Coordination between EPI and MCH should be strengthened.

In regards to the fourth output, Cold Chain and Logistic System are carried out well according to the outcome of the PIDP. For instance, the physical stock of vaccines at central is checked monthly; vaccine requirements are estimated, requests for vaccines are sent to partner agencies and the vaccine stock control system is well monitored. The problems of this output was the lack of training on Cold chain and Logistics, particularly for district EPI staff and irregular monitoring and supervision visits to provinces and districts. Thus, there is a need to provide training on the Cold Chain and Logistic System for the new staff responsible for this work. The supervision and monitoring of the vaccine ordering procedure should be maintained on a regular basis.

According to the fifth output, the warehouse management is also undertaken well with agreement of the 5S radar chart since 2000. However, the quality of warehouse management should be maintained and supervision and monitoring of warehouse should be on a regular basis.

After 2001, no KAP survey was carried out to measure the awareness and understanding of the target population about EPI matters. However, the health education activities have been continued through personal visits, talks, and campaigns in the villages. The major problem is insufficient IEC materials as after the project ended, the materials were no longer produced due to lack of budget. The study team suggests that IEC materials should be revised, reproduced and disseminated to the provinces, districts and health centers.

IV RECOMMENDATIONS AND LESSONS LEARNT

4.1 Recommendation

4.1.1 To Ministry of Health

- The Ministry of Health, particularly the Department of Hygiene and Prevention, should supervise and monitor the EPI activities more closely with the technical team and steering committee on EPI.
- To provide some budget for repair and maintenance, office supplies, transportation and salary on a regular basis.
- To prevent the high turnover of the EPI staff by providing incentives and increasing motivation for working.
- Close collaboration between CC and Technical Working Group

4.1.2 To EPI Management

- To strengthen routine immunization services and increase routine coverage.
- To reduce waste of vaccines in the Outreach Mobile Team and ZZSMS.
- To better coordinate and collaborate with the different health departments namely EPI/MCH, Disease Surveillance in order to accomplish the EPI activities more effectively.
- Monitoring and supervision from top to bottom should be carried out regularly with limited resources in order to sustain the EPI activities.
- Reports should contain complete, reliable and accurate data including coverage rates from the district to province and nationwide. In addition, database of the EPI and Disease Surveillance should be improved and extended to the provincial levels.
- Training for staff that are newly assigned to work in EPI or EPI managers is essential due to lack of skills to be good managers and how to manage EPI work at the grassroots level more effectively. The EPI should organize in-service training at the working place by exchanging and sharing information and supervision from the provincial and district EPI manager at each level. Parallel with this, refresher training courses should also be organized.
- Multi-sector cooperation with mass-organizations and other line ministries such as the LWU and Ministry of Education to integrate vaccinations into the routine work more effectively is needed. The Lao Women's Union should be actively participating in the dissemination of information on immunization. Thus, short-term training for the Lao Women's Union members and the caretakers of children under 5 years in the training center of caretakers should be provided.

4.1.3 To JICA:

- Financial support from JICA to the Ministry of Health, particularly to the EPI program is essential in order to meet the objectives of the National EPI Policy. As mentioned earlier, the PIDP has made a number of positive impacts on the morbidity and mortality rates of children under five years old. For example, the Ministry of Health requires JICA support for vaccine supply and equipment purchase, vehicles, cold chains and logistic systems.
- Technical support to the EPI program is needed in order to strengthen the capacity of the EPI staff as the PIDP already achieved.

4.2 Lessons Learnt

- Improving the management of data collection, recording system and regular reporting system from grassroots to the provincial level is very important. Thus it is necessary to ensure quality data that is reported to the central EPI.
- The government of Lao PDR and the Ministry of Health should make a bigger effort to maintain the sustainability of the EPI activities, to continuously upgrade the capabilities of the health staff in fulfilling their task in order to reach full immunization coverage, and to upgrade the system to a full scale of operation in the long term.
- Despite the increasing contribution of Lao government, technical and financial assistance as well as material and equipment from external donors are still essential.
- The EPI or immunization services and Disease Surveillance is regular work. Therefore, the periodic monitoring and evaluation should be done and their techniques and management must be updated.

SUMMARY SHEET

Ex-post - Evaluation Study conducted by: Laotian Study Team

1-Outline of the Project	
Country: Lao PDR	Project title: Pediatric Infectious Diseases Prevention Project
Issue/Sector: Health	Cooperation Scheme: Technical Cooperation
Division in charge: EPI and Disease Surveillance Section	Total Cost: 438 Million yen
Period of Cooperation: October 1,1998- September 30, 2001	Partner Country's Related Organisation(s): Ministry of Health, Department of Hygiene and Prevention Disease, CMCH, NCLE
	Supporting Organisation in Japan: JICA
	Related Cooperation: " Primary Health Care Project "

1.1. Background of the Project

Lao PDR launched a full-scale immunization program in 1982, but could not spread the immunization services throughout the country as originally planned. To assist the Lao government's endeavors, since 1992, JICA has been supporting the EPI as part of the Primary Health Care Project, which focused on conducting the nation wide polio vaccination and establishing the system surveillance for EPI. The Pediatric Infectious Disease Prevention (PIDP Project) was implemented on 1st October 1998 by the mutual cooperation between the Ministry of Health, National Institute of Hygiene and Epidemiology and Mothers and Child's Health Institute and the Japan International Cooperation (JICA).

1.2 Project Overview

(1) Overall Goal

Mortality and morbidity from EPI target disease are greatly reduced.

(2) Projects purpose

Prevention system for EPI target diseases except TB, with the focus on poliomyelitis, is strengthened.

(3) Outputs

1) Vaccination by regular "out- reach service (vaccination delivery service)"in villages is improved.
2) Surveillance system for EPI target diseases, especially poliomyelitis (AFP) and measles, is improved.
3) EPI in zone zero (area between 3 km from the medical facilities which can provide vaccination) is improved.
4) Cold Chain and Logistics systems are improved.
5) Basic warehouse management, especially for EPI, is strengthened.
6) Awareness and Knowledge of EPI by the Laotian people is improved.

(4) Inputs (at the time of Project Termination)

Japanese side:

Input	Project Period
Long Term Expert	6
Short Term Expert	22
Trainees received	9
Equipment	US $1,005,841 (134 million Yen)
Local cost	46 million Yen

Lao side:

Equipment	N/A
Local cost	198.8 million Kip (3 million Yen)
Others	N/A

2. Evaluation Team
Members of Evaluation Team: Enterprise & Development Consultants, Co., Ltd.
Period of Evaluation: October 13th-November 11th, 2004; **Evaluation type:** Ex-post Evaluation

3. Results of Evaluation
3.1 Summary of Evaluation Results
3.1.1 Impact
The following Table illustrates the success indicator of the EPI programmes. The number of staff working at the Central EPI slightly increased. The EPI vaccine coverage for different antigens has slightly improved. However, there was a decline in the coverage of OPV3, Measles and TT2+ from 2001 to 2003. The morbidity and the mortality cases from preventable infectious diseases increased slightly; however, there was no epidemic outbreak of the preventable diseases. The coverage of target villages and people vaccinated by the outreach mobile team and ZZSMS slightly increased.

Indicator	2001	2003
No of EPI Personnel at Central	23	25
Coverage of different types of vaccines	BCG- 58% DPT3-52% OPV3 -57% Mealses-60% TT2+-37% TT2+(15-45)- 56%	BCG- 63% DPT3-59% OPV3 -51% Mealses-41% TT2+-36% TT2+(15-45)- 38%
Morbidity from EPI target diseases nationwide	AFP-71 Measles- 331 Diphtheria-3 Pertussis- 5 NT- 21	AFP-73 Measles-1810 Diphtheria-24 Pertussis- 200 NT- 18
No of cases of Poliomyelitis	0	0
No of deaths from Poliomyelitis	0	0
Coverage of target villages and people vaccinated by the outreach mobile team	No of villages-11,695 No of population-3,856,600	-No of villages-12,080 No of population-4,534,950
Coverage of target villages and people vaccinated by the ZZSMS	No of villages-843 No of population-588,536	-No of villages-762 No of population-609,217
Government Budget	157,829,954	554,823,268 (2003) 1,013,268,690 (2005)

Source: 2001-2004 Annual Report, EPI Section, Mother and Child Health Center, Ministry of Health, and Disease Surveillance Section, National Center for Laboratory and Epidemiology, Ministry of Health

It is concluded that there are several positive impacts for AFP, NT, Pertussis and BCG and partially negative impact for measles and diphtheria. Other positives impacts such as: (1) the review of national policy on Logistics and Cold Chain, (2) the micro-planning training: planning and budgeting are bottom up and work together with the improvement of the management of the information system, quantity and quality of data collection.

3.1.2 Sustainability

a. Policy Aspect
The Lao government considers that the maternal and child health care and EPI are the first priorities of global health and allocates the annual budget for these activities. Similarly, in the National Poverty Eradication Programme (NPEP), the EPI is considered as priority work in the Health-Related Millennium Development Goals (MDGs) and other government policy.

b. Technological Aspect
The technology that developed during the project such as the surveillance disease, the program

on AFP and database for the vaccines management are still in regular use. Recording, reporting and monitoring as well as logistic management systems developed during the PIDP project have been used as standard practice.

c. Institutional Aspect

The organizational structure of EPI has changed since the project ended. In 2000 the EPI became integrated with MCH from central to district level. The national EPI activities at all levels is under the overall supervision of the National EPI Manager. The verification of the prolongation of the Certificate of Poliomyelitis Eradication at the National Committee for the Certification of the Poliomyelitis Eradication is still effective. The CMCH (EPI/MCH section) and NCLE (Disease Surveillance section) continue to work regularly. The EPI managers, vaccinators and Epidemiology staff continue to implement their knowledge in the practice. The management of logistics and cold chain follows the rules and standards, and recording and reporting are complete and on time. Villagers contribute by providing manpower to carry the cold box to the next village, food to the staff, and providing health education on EPI to the mothers. Most of the mothers know the importance of vaccination.

d. Financial Aspect

The maternal and child health care, the EPI and the Primary Heath Care are always the first priority of the Ministry of Health. In 2005, the Lao government approved approximately US $19,877 to the EPI for the construction of a warehouse. The external support now is still greatly necessary for the Lao PDR.

e. Socio-cultural and Environmental Factors

Generally, there are no negative socio-cultural practices that hinder the continuation of the EPI activities in the villages. However, there are some ethnic minority groups that did not understand the importance of vaccination.

3.2 Factors that have promoted impact and sustainability of the project

a. Factors that promote impact: The PIDP program has successfully integrated into the health-related Millennium Development Goals of the government, and is able to meet the real needs of the communities. There is genuine commitment from the concerned government licensed agencies. As a result, the government has increased their budget to this cause every year.

b. Factors that promote sustainability: All the donor agencies in the EPI programmes have provided technical and financial support, and the PIDP-trained counterparts will continue to apply these trainings and standards into their work and daily lives. Furthermore, the Lao government agencies played a large role in the implementation of the project, and because of the government's commitment to immunization, they will continue to be active. For example, the Committee for Mother and Child Health (CMCH) from central to province, district and village levels still facilitates the immunization. Due to training and advocacy, many government EPI staff is willing to work in the EPI activities.

3.3. Factors that have inhibited impact and sustainability of the project

Factors that inhibit impact and sustainability of the project are similar. The trained counterparts by the short-term and long-term Japanese experts did not conduct in-service training to their colleagues. Therefore, when they moved to new positions, there was a lack of experienced staff to replace them. Another factor is the limited budget of the government to support all activities, such as in-service training of the EPI managers, vaccinators, monitoring and supervision, and to provide supply equipment for vaccines, cold chain, as well as vehicles. The government is still relying on the multilateral cooperation with other GOs such as UNICEF, WHO, GAVI, AUSAID, LUX., but even these donors don't have enough funds for all EPI activities. A final factor that inhibits impact is women from remote areas who do not bring their children to get vaccinated.

3.4 Conclusion

The JICA input alongside that of other donors has been influential in strengthening the EPI Programme in terms of their technical capacity, and EPI management skill by the PIDP Project. The Lao government also contributed to the EPI programmes, but the vaccine supply and technical assistance is heavily dependent on external assistance.

3.5 Recommendations

The Ministry of Health should provide some budget for repair and maintenance, office supply, transportation and salary on a regular basis and prevent high turnover of the EPI staff by developing appropriate policy. They should also supervise and monitor the EPI activities more closely with the Technical Team and Steering Committee on EPI. The approaches to financial sustainability need to be well discussed and agreed within the government organizations and other partners.

EPI management should strengthen routine immunization services and increase routine coverage; reduce waste of vaccines in the Outreach Mobile Team and ZZSMS, and coordinate and collaborate between the different health departments namely EPI/MCH. Disease Surveillance section should be improved in order to accomplish the EPI activities more effectively. Monitoring and supervision from top to bottom should be carried out regularly in order to sustain the EPI activities. Reporting data should be more complete and in the forms of coverage rates from the district to province level, and nationwide. Training for staff that are newly assigned to work in the EPI, or EPI manager, is essential due to lack of managing skills and to manage the EPI work at the grassroots level more effectively.

To JICA:

1) Financial support from JICA to the Ministry of Health, particularly to the EPI program, is essential in order to meet the objectives of the National EPI Policy. For example, the Ministry of Health requires JICA support for vaccine supply and equipment purchase, vehicles, cold chains and logistic systems. 2) Technical support to the EPI program is needed in order to strengthen the capacity of the EPI staff as the PIDP already achieved.

3.6. Key Factors of Success and Lessons Learnt

1) Program was implemented using existing structure
2) Well-trained EPI staff
3) Local organizations involved (i.e. Lao Women's Union) = active participatory approach
4) Good bi and multilateral cooperation with contribution from the government
5) More responsibility to prov/dist/health centers through decentralization to cover immunization
6) New safety standards and technology on administering immunization

ANNEX 1

LOGICAL FRAMEWORK

Project name: MOH-JICA podiatric Infection Disease Prevention (PIDP) Project in Lao PDR
Target Area: The Whole Country of Lao PDR

Duration: Oct. 1998-Sep.2001
Target Groups: Parents and children under 5 years old
Date issued: May 14, 2001

Narrative Summary	Objective verifiable Indicators	Means of Verification	Important Assumption
Overall goal Morbidity and Mortally from EPI target diseases are greatly reduced	IMR is diseased National number of cases with EPI diseases and death are decreased.	National EPI diseases surveillance data In formation from National Centre for Statistics	
Project Purpose Prevention system for EPI target disease except TB, with focus on poliomyelitis is strengthened.	1. Certification of poliomyelitis eradication by WHO regional committee is improved. 2. National EPI vaccine coverage for different antigens for the past 3 years is improved. 3. EPI disease surveillance including active hospital investigation is improved and expanded. 4. Basic data of zone zero Social Mobilization strategy ZZSMS is increased. 5. Vaccine ordering procedure is formulated and implement by each province based on the National policy.	1. Certification by WHO regional committee National documentation for the certification of poliomyelitis eradication 2. National EPI coverage data 3. National EPI diseases surveillance data 4. Report of EPI review	- Hygiene conditions are not worsened. - Nutritional status is
OUTPUTS			
1. Vaccination by regular out-reach service in village is improved.	1-1. Number of the village (districts) where health worker visit 4 times a year is increased. 1-2. Numbers of National EPI workshop –province by UNICEF are held.	1. Report of EPI/ Surveillance section.	
2. Surveillance system of EPI target disease, especially poliomyelitis (AFP) and measles is improved.	2-1 Numbers of complete, timely surveillance reports on target disease coming from district are gathered. 2-2 AFP surveillance indicators for the 3 year are improved.	2. Report of EPI /Surveillance section report of JICA EPI/Surveillance expert.	
3. EPI service in zone zero is improved through MCH activities.	3-1 Number of village (districts) where the ZZSMS is conducted. 3-2 Data of cluster survey on EPI coverage and utilization of fixed centers in zone 0 and 1in Luangphabang province, where a pilot district exist is obtained. 3-3 Annual work plan and budget are developed at central level and provincial level. 3-4 AZZSMS guideline is developed. 3-5 Immunization list for target children is developed in villages. 3-6 Percentage of immunized children at fixed centers of zone 0 strategy is increased. 3-7 Public awareness in EPI, surveillance and MCH at least in pilot area, are improved (Number of participants at the IEC events is increased).	3-1 Report from provincial EPI section (based on 1995 census and GIS). - Report at pilot District Hospital, Report of JICA PIDP project (Cluster survey in Luanphabang). - Report of JICA MCH/Zone zero experts. - Report on Workshop from MCHI annual and quarterly reports on budget. /work plan from provinces. - Report of JICA MCH/Zone zero expert(interview with key personnel and focus group)	
4. cold chain and logistics systems are improved	4-1 Discrepancy between record and physical stock of vaccines in central storage is decreased 4-2 Expired vaccine at central storage is decreased. 4-3 80% of provinces request vaccine based on the National policy. 4-4 Stock-out of vaccine at provincial and district level is decreased.	4. Vaccine stock record ad report on stack-taking. - Vaccine request form from provinces and checklist on cold chain and logistics. - Report of JICA Cold and logistics expert.	
5. Basic warehouse management, especially for EPI, is strengthened.	5-1 5S levels are improved to 30% on the 5S radar chart by year 2000. 5-2 Difference between stock in ledger and actual stock in warehouse is decreased.	5. Report of CPID (Stock in ledger and physical stock) - Vaccine stock record and report on stack-taking.	
6. Awareness and knowledge on EPI of Lao people are improved.	6-1 Degree of understanding about EPI target diseases.	6. KAP Survey and other related surveys.	

Activities	INPUTS		
	Lao Side	Japanese side	
1. Vaccination by regular out-reach service in village is improved. 1-1 Organize meeting on EPI managers on planning and management(national EPI workshop) 1-2 Organize annual EPI reviews and planning at central level. 1-3 Establish GIS on EPI/Surveillance. 1-4 Implement routine immunization. 1-5 Implement SNIDs (sub national immunization data). 1-6 Implement mopping-up (HRRI), when needed. 1-7 Train local staff. 1-8 Train VHW on EPI/surveillance 1-9 Make the list of the immunization. **2. Surveillance system of EPI target disease, especially poliomyelitis (AFP) and measles is improved.** 2-1 Supervise and monitor reporting and data collection. 2-2 Conduct 60 days follow-up 2-3 Conduct immediate investigation of high-risk AFP. 2-4 Conduct active case search in high-risk areas. 2-5 Collect adequate stool specimens shipping to NIID. 2-6 Train local staff. 2-7 Awards good AFP report. 2-8 Conduct outbreak investigation (Especially measles). 2-9 Conduct measles zero-epidemiology. 2-10 Produce IEC material on EPI /surveillance. **3. EPI service in zone zero is improved through MCH activities.** 3-1 Obtain nation-wide data of village name and facility and summarized by GIS. 3-2 Conduct 30 cluster surveys in zone 0 and 1 in LP. 3-3 Regional meeting and study tour Monitoring tour. 3-4 Coordinate effective fixed center staff training conducted by the project and other organization. 3-5 Promote immunization through the mass media. 3-6 Identify susceptible children and women through zone zero and strategy. 3-7 Conduct IEC event at village level. 3-8 Province IEC material 3-9 Select pilot area 3-10 Improve facility and equipment of the district hospital in the pilot area. 3-11 Conduct baseline survey (FGO and KAP) in pilot area. **4. Cold chain and Logistics systems are improved.** 4-1 Check physical stock of vaccine at central storage monthly. 4-2 Estimate vaccine requirement and submit requests to partner agencies. 4-3 Monitor/supervise vaccine stock control system. 4-4 supervise on information flow between central and province 4-5 Hold training seminars on Cold chain and Logistics. 4-6 Conduct Monitoring/Supervision visit to province and districts. **5 Basic warehouse management, especially for EPI, is strengthened.** 5-1 Check 5S activities twice a year. 5-2 Prepare manuals for warehouse management. 5-3 Implement stock-taking in That Luang warehouse and up-date the inventory twice a year. **6 Awareness and knowledge on EPI of Lao people are improved.** 6-1 Hold national campaign for Pollo(Bye-bye Pollo 2000). 6-2 Produce and distribute Ice material. 6-3 Hold KAP survey.	1 1. Project office 2. Counterparts 2 Project implementation Cost. 3 Total 198.8 million kips, 115 up to JFP 2000.	1. Personnel (up to the end of the project) - Long -term expert (in M/M) Chief Advisor 36.0 Coordinate 36.0 MCH 33.8 Cold chain and Logistics 24.2 - Short-term experts (in person, as of April30, 2001) PCM 1 IEC 3 Warehouse management 3 MCH 2 Surveillance Management (GIS)2 Nurse 1 Measles Lab 2 EPI/ Surveillance 2 Active case Search 2 2. Training in Japan (in person) EPI 4 Warehouse management 2 Media 2 MCH 1 Total 27 3. Equipment provision Total US$ 1,003,836 million(JFY1998-2001 actual and 2001 budget) 4. Necessary expanses for the project implementation.	Newly trained personnel do not leave his/her job. NTP staff accept the implementation of the **Pre-condition** - Enough vaccines are available. - Community size is maintained - Cold chain equipment is kept its current shape - Road conditions are not worsened. - Existing hospitals maintain their facilities.

ANNEX 2

COMPELTE EVALUATION GRID

Annex 2: Evaluation Grid
Ex-Post Evaluation Study for Pediatric Infection Disease Prevention Project

<table>
<tr><th>Criteria</th><th>Main Questions</th><th>Evaluation Questions

Sub Questions</th><th>Achievement

Criteria / Measures</th><th>Results</th></tr>
<tr><td>IMPACT</td><td>1-To what extent has the project s' overall goal been achieved since the time of terminal evaluation?</td><td>-How much have the infant morbidity and the mortality rates from target diseases of EPI, especially AFP and measles and the IMR rate decreased?</td><td>Comparison of the EPI disease rate between 2001 and 2003
Comparison of morbidity and the mortality of infants and the rate of IMR between 2001 and 2003.</td><td>National and Provincial
Comparison of the EPI Disease Rate between 2000 and 2003
<table>
<tr><td>Diseases</td><td>Province</td><td></td><td>2000</td><td>2001</td><td>2002</td><td>2003</td></tr>
<tr><td>AFP</td><td>National</td><td>Cases</td><td>71</td><td>55</td><td>79</td><td>73</td></tr>
<tr><td></td><td></td><td>death</td><td>0</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td></td><td>VTE</td><td>Cases</td><td>9</td><td>4</td><td>1</td><td>4</td></tr>
<tr><td></td><td></td><td>death</td><td>0</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td></td><td>LPB</td><td>Cases</td><td>9</td><td>17</td><td>13</td><td>17</td></tr>
<tr><td></td><td></td><td>death</td><td>0</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td></td><td>CPS</td><td>Cases</td><td>3</td><td>6</td><td>7</td><td>6</td></tr>
<tr><td></td><td></td><td>death</td><td>0</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>Measles</td><td>National</td><td>Cases</td><td>331</td><td>91</td><td>2070</td><td>1810</td></tr>
<tr><td></td><td></td><td>death</td><td>2</td><td>1</td><td>22</td><td>8</td></tr>
</table></td></tr>
</table>

					death	0	0	0	0
					LPB	Cases	24	9	184	155
						death	0	0	6	0
					CPS	Cases	9	6	9	9
						death	0	0	0	0
				Diphtheria	National	Cases	3	2	40	24
						death	1	1	6	10
					VTE	Cases	0	0	2	7
						death	0	0	2	1
					LPB	Cases	0	0	2	0
						death	0	0	1	0
					CPS	Cases	0	1	0	0
						death	0	0	0	0
				NT	VTE	Cases	5	1	0	2
						death	0	0	0	1

						death	0	0	0	0
					CPS	Cases	0	0	1	0
						death	0	0	0	0
				Pertussis	VTE	Cases	5	0	0	43
						death	0	0	0	0
					LPB	Cases	5	1	3	4
						death	0	0	0	0
					CPS	Cases	0	4	0	8
						death	0	0	0	0

(Source: Center of Epidemiology and Laboratory)

	2- What positive and negative impacts have the project had in policy, technological, institutional and beneficiary's aspects?	-What are Project's effects on National Policy on EPI management, for instance, the vaccine ordering procedure, staffing, etc...?	Comparison of Government's priority in EPI during and after project

-The Ministry of Health considered EPI as the 1st priority of the 5 year National Health Planning
-The provincial EPI manager agrees with the government's priority in EPI management, especially National Policy on Logistics and Cold Chain. For instance, vaccine ordering procedure during and after project, the EPI manager follows the same procedure
- In the 2001, the Ministry of Health modified the National Policy on Logistics and Cold Chain. The new system of cold chain was introduced by the program.
- The provincial EPI manager order vaccines by using EPI formula
- The district EPI manager orders required vaccines by using the amount of vaccines that they used in the previous month. However, they have to calculate the amount of vaccine that they require by using EPI formula.

		-What are technological changes that project has created?	Comparison of the technology/techniques introduced by project and the current ones	**The technology/techniques that were introduced by Project:** 1) Mass campaign elimination of Poliomyelitis 2) Establish GIS on EPI/Surveillance on AFP and Measles 3) EPI services in Zone Zero is improved 4) Cold chain and Logistics are improved 5) IEC materials are improved **After Project, the new technology that was introduced are:** 1) Vaccine Hepatitis B within the DPT and (called "DPTHb") 2) New AD syringes for safe injection. 3) Safety box and waste disposal transportation 4) Generator for burning syringes AD
		- Does project have any positive and negative impacts on the EPI program structure, facilities, number and capacity of staff and budget for activities of EPI program?	Performance, strong points and constraints of EPI after project ended, number and capacity of EPI staff, structure, input supply, budget from government and other sources	**Positive impact:** - Staff has trained during the project continue to work in the EPI activities effectively. - The number of EPI staff has increased; particularly the number of MCH staff at district level. - Vaccine supply was supported by other GOs such as JICA, GAVI, WHO. Recently, GOs required about a 20% contribution from MOH - Operational fund continued to support GOs, namely UNICEF, WHO and GAVI. - Cold chain is still running according to the standard. - Some vehicles (cars, motorcycles), tak-tak, motor boat, computers, photocopy machines, fax machines, LCD and medical equipment that were provided during the project were running about 50% according to the technical standard. **Constraints:** - High turnover of EPI manager and staff that have been trained during the project and new staff replacing them. The new staff did not have any knowledge and skills in EPI management and cold chain because after project, there was no training in EPI management and logistics.

				- Due to limited budget from the government, the MOH has to rely on other donor sources such as JICA, GAVI, WHO, and UNICEF. - Irregular supervision monitoring and evaluation - Reporting and EPI information system was not set up properly at the provincial and district level. - Coordination between EPI at provincial and district levels is not adequate (ZZSMS and MCH and epidemiology/Disease Surveillance)
		- What are the positive and negative effects of the project on the target beneficiaries (minority and vulnerable group) economically and socially?	-Social effects such as family conflicts, religious conflicts, behavior of village men and women -Economic effects on production, family income	**Positive effects:** - According to the FGDs in the villages, mothers of children under two years old understood the importance and usefulness of vaccinations. So the health status of children will be strengthening and they will not get the 7 infections that could be prevented by vaccinations. - The majority of mothers know the consequences of 7 diseases. - There is no family or religious conflict. - There are no misconceptions of vaccinations. For instance, mothers said that after vaccinations, their children did not get any infection compared to children who did not get any vaccination. - Economic effects on production: if their children are healthy, the mothers said that they will have time to earn income, thus family income is increased. **Constraints:** - Some ethnic minority groups (Lao theung) did not understand the importance of vaccinations. - Some mothers could not list the diseases that could be prevented by vaccinations, or the consequences of 7 diseases, due to low level of education or illiteracy. - There were side effects after immunization such as fever. The mothers know how to resolve this problem by giving sponge to children and paracetamol if the child had high fever. As a result, some mothers did not bring their children to get vaccinated anymore.

	3- Are there unintended factors that influence the achievement of the project's overall goal? For, instance, the cross cutting issues such as: policy aspects, technology aspects, socio-cultural aspects, economic and financial aspects?	-What was the government's policy on EPI in the past 3 years?	Compare government policy in the past 3 years	- Government policy over the past 3 years has changed. The Ministry of Health considered EPI as the 1st priority of the 5 year National Health Planning. - In 2001 and 2002, the national coverage target for children <1year old of DPT3, OPV3, Measles and BCG was at least 85%; for TT2+ was at least 50%. - The national coverage target for 2003 was to achieve fully immunized coverage (FIC) of 55% in children who reached their 2nd birthday and by achieving coverage of at least 2 doses in 40% of women of childbearing age. Specific antigen coverage targets for children would be BCG-70%, DPT3-60%, OPV3-60% and measles-55%. - In 2003, the EPI expanded introduction of DPTHb to at least 7 additional provinces (for at least 10), introduced the auto-disable (AD) syringes and syringe safety boxes into the routine immunization system at and introduced BPDTHb at the same time. - Sustained polio-free status. - Approved Maternal Neonatal Tetanus Elimination (MNTE) - Approved Accelerated Measles Control Plan of Action.
		-How have the economic conditions in the area been over the past 3 years?	Trend of household income	- Trend of household income is increasing, both in government and private sectors. This was most likely due to an increase in GNP and high living expenses. - According to the FGDs with mothers, during the past three years their children have been healthy, so the mothers did not have health care expenses and did not lose their working time. Thus the household income has increased.
		-What is the focus of donor support in the health sector? How did the coordination between them affect the EPI program?	Support policy, budget of donor projects, pro's and con's of the coordination, potentialed for future coordination	**-Policy of donor support:** - JICA: Provided vaccine supply, logistics and cold chain. - WHO: Technical cooperation from 1998 to 2004- has not changed - GAVI: No representative in Lao PDR; have given the authority to the ICC and TWG for making decisions. They introduced new vaccine (Hb), AD syringes and injection safety box - UNICEF: Reduce the infant morbidity and mortality by improving the coverage of vaccination - AUSAID: Policy of the government has changed and the

<table>
<tr><td></td><td></td><td>-What is the current awareness level and behavior of village men and women on the issues?</td><td>Positive changes in awareness and behavior of villagers toward EPI, roles of women in family and society after the project ended</td><td>emphasis is on human resource development, education programs, economics, marketing and rrade.

-Positive changes in awareness and behavior of villagers toward EPI after project ended:
- Women/mothers still have awareness in bringing their children to do vaccination
- Women from Laoloum have more knowledge on the importance of vaccination than women from Lao Soung and Lao Theung (FGDs). However, knowledge of women on immunization is superficial.</td></tr>
<tr><td>SUSTAI NA-BILITY</td><td>1-How has the counterpart organization maintained the strengthened prevention system for EPI target diseases with focus on Polio since the end of the project?</td><td>-Is the certification of Poliomyelitis eradication issued by WHO still effective?</td><td>-Verification of the prolongation of the Certificate of Poliomyelitis Eradication at the National Committee for the Certification of the Poliomyelitis Eradication. (=NCCPE)</td><td>Central
There were no cases or deaths from Polio in 2000 and 2003
<table>
<tr><td></td><td></td><td></td><td>2000</td><td>2001</td><td>2002</td><td>2003</td></tr>
<tr><td>Polio</td><td>National</td><td>Cases</td><td>0</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td></td><td></td><td>death</td><td>0</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td></td><td>VTE</td><td>Cases</td><td>0</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td></td><td></td><td>death</td><td>0</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td></td><td>LPB</td><td>Cases</td><td>0</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td></td><td></td><td>death</td><td>0</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td></td><td>CPS</td><td>Cases</td><td>0</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td></td><td></td><td>death</td><td>0</td><td>0</td><td>0</td><td>0</td></tr>
</table></td></tr>
<tr><td></td><td></td><td>- Has the EPI vaccine coverage for different antigens improved?</td><td>-The increase of the coverage rate</td><td>National and Provincial
The EPI vaccine coverage for different type of vaccines
<table>
<tr><td>Vaccines</td><td>Prov</td><td>2000</td><td>2001</td><td>2002</td><td>2003</td></tr>
<tr><td>BCG</td><td></td><td>58</td><td>58</td><td>67</td><td>63</td></tr>
<tr><td></td><td>VTE</td><td>54</td><td>45</td><td>67</td><td>45</td></tr>
<tr><td></td><td>LPB</td><td>73</td><td>69</td><td>72</td><td>83</td></tr>
<tr><td></td><td>CPS</td><td>58,7</td><td>66,9</td><td>74</td><td>75</td></tr>
<tr><td>DPT3</td><td></td><td>52</td><td>47</td><td>54</td><td>49</td></tr>
<tr><td></td><td>VTE</td><td>57</td><td>41</td><td>65</td><td>35</td></tr>
</table></td></tr>
</table>

	LPB	61	45	50	37
	CPS	10,9	10,4	12	10.
OPV3		57	52	57	51
	VTE	57	41	65	35
	LPB	61	45	50	37
	CPS	53	47,9	54,8	55
Measles (<1 year.)		60	72	43	41
	VTE	60	39	55	45
	LPB	84	56	78	76
	CPS	52	34	60	53,9
TT2+		37	33	41	36
	VTE	61	33	47	31
	LPB	44	44	46	46
	CPS	12	42	42	40
TT2+ (15-45)		56	33	41	38
	VTE	40	21	61	21
	LPB	63	83	37	61
	CPS	15	33	43,8	32

District (Ex: Pak Ou district, Louangprabang province)

The EPI vaccine coverage for different type of vaccines

	2000	2001	2002	2003
BCG	80,5	60	54,5	62,5
DPT3	67	50	37,6	70
OPV3	66,7	50	37,7	72
Measles (9-23m)	68	60,6	46	57
TT2+	54	58	46	67,5
TT2+ (15-45)	59	35	30,8	25
Hepatitis B				

		-Has basic data of ZZSMS targeted villages been continuously obtained? Has the ratio of implemented ZZSMS increased?	Annual report of coverage villages of ZZSMS and target people vaccinated rate in 2000-2003. *Remark: EPI ZZSMS was integrated into one general EPI in 2001. Therefore, the ZZSMS data regarding immunization coverage was not separated from the general EPI data. As a result, we don't have it.	Annual report of ZZSMS coverage of villages

		Whole	2000	2001	2002	2003
Province	N	18	18	18	18	18
	%		100	100	100	100
District	N	141	93	141	141	141
	%		66	100	100	100
Village	N	1539	843	946	889-	762
	%		55	61.4	57,76	49,51
Population	N		568,536	1,315,019	476,034	510,064

Target population and coverage areas of ZZSMS by province

Provinces		2000	2001	2002	2003
VTE	Population ZZSMS	71,623	75,340	30,966	52,7
	No district	12	12	12	12
	No villages	87	100	35	64
LPB	Population ZZSMS	60,479	62,543	51,289	38,9
	No district	5	8	11	11
	No villages	55	73	74	54
CPS	Population ZZSMS	107,103	114,682	92,136	108.
	No district	10	10	10	10
	No villages	146	147	118	143

National

The EPI vaccine coverage of ZZSMS for different types of vaccines

	2000	2001	2002	2003
BCG	99%			
DPT3	71%			
OPV3	71%			
Measles (9-23m)	97%			
TT2+				
TT2+ (15-45)				
Hepatitis B				

(Data not available)

District (Ex: Chomphet district, Louangprabang province)

The EPI vaccine coverage for different types of vaccines

	2000	2001	2002	2003
BCG	100	100	66.67	62.98
DPT3	91.66	99	68	50
OPV3	91.66	56	58	50
Measles (9-23m)	79.31	27	67	50
TT2+	100	100	63	60.87
TT2+ (15-45)	48.93	71.49	33	52.76

-How has the vaccine ordering procedure been implemented from central EPI to provincial EPI?

Refer to the annual plan on the request of vaccines needed for one year and each time (1 time every 2 months), and how the need of vaccines is calculated.

Annual plan on the request for vaccines needed for one year and each time

Central EPI

The need of vaccines is calculated based on:

-Number of target population,
-Numbers of wastage
-Actual number used in the previous year
- Drop out 25%

<table>
<tr><td></td><td></td><td></td><td></td><td>Provincial EPI
The need of vaccines is calculated based on:
-The estimation of target group, EPI formula and 10% wastage. The provincial EPI manager usually submitted the request once every 2 months.</td></tr>
<tr><td></td><td rowspan="2">2- What are the outcomes of the project since the termination of the project?</td><td>- How has the out-reach service performed in villages?</td><td>Comparison of number of villages where the out-reach team has visited 4 times/year during and after project.

Number of national/ provincial EPI workshops during and after project.</td><td>Number of villages where the out-reach team visits 4 times/year:
<table>
<tr><td></td><td>2000</td><td>2001</td><td>2002</td><td>2003</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>No. of villages</td><td>12,086</td><td>11,907</td><td>12,390</td><td>11,904</td></tr>
</table>
No of EPI workshops:
<table>
<tr><td></td><td>2000</td><td>2001</td><td>2002</td><td>2003</td></tr>
<tr><td>National EPI WS</td><td>1</td><td>1</td><td>1</td><td>1</td></tr>
<tr><td>Provincial EPI WS</td><td></td><td></td><td>Trainning 1 day on new Vaccine Hb in VTE Municipality
-Training on cold chain
-Training on EPI Surveillance management in Khon Kaen</td><td>-Training 1 day on new Vaccine Hb
- Training on Planning and Management EPI in Khone Kaen 91 month)</td></tr>
</table></td></tr>
<tr><td></td><td>-How well has the Surveillance System been implemented?</td><td>The performance of the surveillance system at all levels.</td><td>Percentage of Completeness and Timeliness of weekly report from Province
<table>
<tr><td></td><td>Completeness</td><td>Timeliness</td></tr>
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<tr><td></td><td></td><td></td><td></td><td>Provincial EPI
The need of vaccines is calculated based on:
-The estimation of target group, EPI formula and 10% wastage. The provincial EPI manager usually submitted the request once every 2 months.</td></tr>
<tr><td></td><td>2- What are the outcomes of the project since the termination of the project?</td><td>- How has the out-reach service performed in villages?</td><td>Comparison of number of villages where the out-reach team has visited 4 times/year during and after project.

Number of national/ provincial EPI workshops during and after project.</td><td>Number of villages where the out-reach team visits 4 times/year:
<table>
<tr><td></td><td>2000</td><td>2001</td><td>2002</td><td>2003</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>No. of villages</td><td>12,086</td><td>11,907</td><td>12,390</td><td>11,904</td></tr>
</table>
No of EPI workshops:
<table>
<tr><td></td><td>2000</td><td>2001</td><td>2002</td><td>2003</td></tr>
<tr><td>National EPI WS</td><td>1</td><td>1</td><td>1</td><td>1</td></tr>
<tr><td>Provincial EPI WS</td><td></td><td></td><td>Trainning 1 day on new Vaccine Hb in VTE Municipality
-Training on cold chain
-Training on EPI Surveillance management in Khon Kaen</td><td>-Training 1 day on new Vaccine Hb
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<table>
<tr><td></td><td>Completeness</td><td>Timeliness</td></tr>
</table></td></tr>
</table>

				2001 | 94 | 87 2002 | 94 | 69 2003 | 16 | 89
		- Does MCH at all levels have necessary facilities to provide EPI service at the ZZSMS?	Data on logistics: equipment, transportation, cod chain, vaccine supply and quality, safe injection, sharps waste, and budget	**At the end of Project (2000)** - Annual work plan and budget plan are developed at provincial levels due to improvement. Support by JICA and UNICEF is increased. - During the project, some provinces and districts received some medical equipment (baby scales, tongue depressors and absorbent cotton) and IEC materials from the project. **After Project (2003)** - The MCH at all levels did not develop any annual plan for vaccination at the ZZMS, however, the EPI for each level developed annual plan, particularly for the amount of requested vaccines. - EPI for the ZZMS has been combined in the MCH at all levels. - The MCH at all levels did not receive new medical equipment or IEC materials. However, they have basic facilities to provide EPI service at the ZZSMS. They received some shells for documents, computers, and photocopy machines. - The MCH at the provincial and district level requested vaccine supply, safe injections from provincial and district EPI once per week. - For the sharps waste and safe injections, at the district level the sharps waste was carried out according to the standard. However, in LPB province, Chomphet and Pak-Ou districts in particular did not follow the standard of the safe injection. For example they did not mark the number of syringes put in the safety box. - The MCH did not receive budget for the EPI service at ZZSMS.
		-How have the Cold Chain and Logistics system worked? -How is the safety of injection and disposal of waste?	Comparison of current practice to the standards and regulations	**After the project:** - Cold chain is performed according to the standard at all levels - Stock-out of vaccines at provincial and district level has continued to decrease. - The new safety box, AD syringe injection, and burning generator were introduced after the end of project and supported by GAVI. Then the EPI staff followed this condition. All waste disposal was

				burned at the provincial level.
		-How well has the warehouse for EPI been managed?	Comparison of warehouse management to standards	- The management of warehouse continues to follow up 5S- 5S radar chart by 2000. - Update on the inventory of stock is performed twice per year - No difference between stock in ledger and actual stock in warehouse
		- Does EPI-MCH staff deliver health education on the importance of immunization, the severe consequences of these diseases, the schedule of vaccinations, the time and place of delivery and the effects of the vaccination? -Does NCMCH and his secretariat team work on this matter or not? - Are IEC materials sufficient or not?	Check at all level especially at provincial and district level.	- The EPI staff conducted health education on the importance of immunization, the schedule of the vaccinations, the time and the place of the delivery, and the effects after the vaccination on the mothers before immunization. - However, some EPI staff provided health education to mothers individually or in groups depending on the condition. - The health education is superficial and they did not emphasize the severe consequences and what diseases could be prevented by vaccination. - The NCMCH and his secretariat team just resolve the problems when the outreach teams have the problems with vaccination or the mothers do not understand. - The LWU also contributes to the EPI activities by providing campaigns to mothers who have children less than 1 year old, and women at reproductive age to vaccinate. - The LWU also integrates the campaign on vaccination into their routine work and have provided some advocacy at their monthly meetings, in addition to other activities. - The General Education Department and sections at the provincial and district level have provided advocacy on vaccination to the pupils to inform their parents to bring their children, women at reproductive age 15-45 years, and children less than 3 years old in the creches to vaccinate. - There were not enough IEC materials in the health centers and village levels. Some outreach teams did not have any flipcharts to illustrate to the people.
		- How well have the implementing agencies maintained the system,	Comparison of the structure of EPI, its performance and number of staff, staff	Organizational structure of EPI: The organizational structure of EPI has remained the same since the end of the project. At the provincial and district levels, the number

		organizational structure, technology, and developed the staff capacity transferred by the project?	development program	of staff is reduced. Performance: - The EPI staff gained the skills and knowledge during the project and continue to work in the EPI programs. - The EPI staff gained new knowledge on micro-planning after the project ended. - There was some training on introducing the new vaccine DPTHb in 2003, on logistics and cold chains in 2002, and on EPI management in Khon Kaen, Thailand. Number of staff: -Number of staff working at central, provincial and district level is the same as during the project. However, there is turnover of EPI staff. -Number of EPI staff at the provincial level has not changed and there is no movement -At the district level, EPI staff have to move to work in other areas. Thus there is high turnover rate.

Province	2001				2002				2003		
	EPI Pro	EPI dis	MCH pro	MCH dis	EPI Pro	EPI dis	MCH pro	MCH dis	EPI Pro	EPI dis	MCH pro
Central	23				24				25		
VTE	2	22	2	35	2	22	2	35	2	22	2
LPB	4	38	17	42	4	36	16	40	4	38	14
CPS	6	23	8	29	6	24	7	29	5	25	7

Technology:
After the project ended, technology that had been introduced by the project was sustained to some extent.
-The GIS was not used due to high operating cost. Now, hand maps are used.
-Cold chains and Logistics continue to work as the same procedure.

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<td></td>
<td>3. What are the external factors that contribute/ hinder the sustainability of the project outcomes in policy, financial, environmental, and socio-cultural aspects?</td>
<td>- Has the Lao government continued support to the EPI program?</td>
<td>Government Policy on EPI, medium and short term planning</td>
<td>Policy on EPI:
-The national policy of EPI in 2001and 2002 is the same national indicator for BCG, Measles, DPT3 and OPV3 at 85 %, and ATT2+ 50 %.
- The national coverage target for 2003 is to achieve fully immunized coverage (FIC) of 55% in children reaching their 2nd birthday and by achieving coverage of at least 2 doses in 40% of childbearing age women. Specific antigen coverage targets for children will be BCG-70%, DPT3-60%, OPV3-60% and measles-55%.
- In 2003, the EPI expanded introduction of DPTHb to at least 7 additional provinces (for a total of at least 10), introduced the auto-disable (AD) syringes and syringe safety boxes into the routine immunization system, and introduced BPDTHb at the same time.
- Sustain free polio-free status.
- Approve Maternal Neonatal Tetanus Elimination (MNTE)
- Approve Accelerated Measles Control Plan of Action.</td>
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<td>-Has the funding for EPI from external sources from '01-'04 increased or decreased?</td>
<td>Comparison of funds available for EPI between 2001 to 2004</td>
<td>Comparison of funding from donor agencies
<table>
<tr><td></td><td>2001</td><td>2002</td><td>2003</td><td>2004</td></tr>
<tr><td>UNICEF</td><td>2,277,141,09K</td><td>3,443,137,740K</td><td>3,080,189,651K</td><td>1,860,187,628K</td></tr>
<tr><td>WHO</td><td>1,257,717,510k</td><td>1,007,296,500K</td><td>1,142,375,325K</td><td>124,971,000K</td></tr>
<tr><td>GAVI</td><td>0</td><td>22,599.00$</td><td>117,788.14$</td><td>166,716.25$</td></tr>
<tr><td>JICA</td><td>5,074,351,800K</td><td>3,120,009,375K</td><td>3,848,698,675K</td><td>3,313,362,675K</td></tr>
<tr><td>BHN</td><td>58,588.86$</td><td>42,437.95$</td><td>30,557.00$</td><td>63,281.00$</td></tr>
<tr><td>LXB</td><td>5,320.00$</td><td>3,996.00$</td><td>6,636.59$</td><td>1,622.00$</td></tr>
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</tr>
<tr>
<td></td>
<td></td>
<td>Have the EPI activities had any positive or negative effects on environment?</td>
<td>The negative effects on environment if the syringes and needles used were not burned correctly in remote areas. There will be a high risk of infection.</td>
<td>- There was no negative impact on the environment because the EPI had introduced the safety box and injections and the burning generator.
- Each mobile team had to bring back the safety box to the provincial EPI and they get some rewards.
- The EPI at provincial level is responsible for the burning of needles and syringes that were collected from the mobile team from each district.</td>
</tr>
</table>

		Are there any socio-cultural practices that enable or hinder EPI activities, especially in villages?	There are no socio-cultural practices that hinder EPI activities, especially in villages.	- There are no major negative socio-cultural practices that enable or hinder EPI activities in the villages. However, some ethnic minority groups still did not correctly and fully understand the importance of vaccination. For example, after being vaccinated some children get sick and their mothers can't work. - In general, mothers have knowledge on the importance of immunization and take their children to get vaccinated.

ANNEX 3

ACTUAL STUDY SCHEDULE

Annex 3: Schedule of Site Visits

Date –Time	Name of Persons Met	Position	Place of work
Thurs. 14.10.04			
-09.45-10.45 a.m.	Dr. Somthana Douangmala	- Deputy Director of CMCH National Manager of EPI Program	CMCH
-11.00-12.00 a.m	Mrs. Siphaphone	-Chief of Crèche and Kindergarten -Department of General Education	MoE
-14.00-15.00 p.m	Dr. Craig Wilson	-Immunization section	WHO
Fri. 15.10.04			
-08.30 – 09.30 a.m.	-Dr. Bouavanh Sengsathit	-Director of the Center for Mother and Child Health(CMCH)	CMCH.
-09.45-10.45 a.m.	- Dr. PhengtaVongphachan	-Deputy Director of NCLE	NCLE
-11.00- 12.00 a.m	-Dr. Chanthavong Savathchilang	-Chief of the Planning section	EPI, CMCH
-13.00- 14.00 p.m.	-Dr. Chansay Pathammavong & Mr. Tomiyasu	-Officer, ZZSMS and JICA Radio Engineer	EPI, CMCH
-14.00-15.00 p.m.	- Dr. Kongxay Phounphenghack	-Officer EPI, Cold chain-Logistics	EPI, CMCH

-15.00-16.00 p.m	- Visit warehouse and logistics		CMCH
Mon. 18.10.04 :			
-08.30-09.30 a.m.	- JICA Representative , Laos office	JICA Laos Office.	- JICA Office
-11.00-12.00 a.m	- The Representative or Vice	The Representative of UNICEF	- UNICEF
- 13. 30-14.30 p.m.	- The Representative of AUS-AIDS	The Representative or Vice	- AUS-AIDS
-14.45-16.00.p.m.	- Dr. Anothay Kongsayak	Deputy Director of CIEH,	CIEH,
Tues. 19.10.04 :			
-08.30-12.00 a.m.	- Visit Service MCH , ZZSMS , MCH Hospital	MCH Director - Dr. Bouavanh Sengsathit	MCH
-13.30-14.30 p.m	-Dr Samlan	-Director of Malaria Center	Malaria Center
-14.45-15.45 p.m.	- LWU	-Department of Interest of Mother and Child	-LWU
Wed. 20.10.04 :			
-08.30-09.30 a.m.	- Dr. Chanthanome Manotham	-Director of the Cabinet of the MOH.	-MOH.
-09.40-10.30 a.m.	- Dr. Bounlai Phommasak	- Deputy Director of the Department of Hygiene and	-MOH.

-11.00-12.00 a.m. & 13.00-16.00 p.m.	- Time reserved for the interviewee whom we can not meet for document collection	Prevention Disease.(+DOH) At central level	Vientiane Capital

Vientiane Province

Thursday.21.10.04 :			
-07.00- 08.30 a.m.	Travel to Vientiane province		
- 08.30-09.30a.m.	- Director of Department of Provincial Health	-To meet The Director of the Department of Provincial Health (DPH) - To discuss the objective and the work plan for the next 2 days in Vientiane province.	- DPH
-09.40-12.00 a.m.	-Visit MCH service at provincial hospital ZZSMS	- Provincial Hospital	-Provincial Hospital
- 13.30-14.30 p.m.	- Interview EPI Manager at provincial level	-DPH	-DPH
-14.30- 15.30 p.m.	-Interview chief of MCH of DPH	-DPH	- DPH
-15.30-16.30 p.m	- Interview chief of Epidemiology of unit	-DPH	-DPH

	Epidemiology provincial.		
Fri. 22.10.04 :			
-07.30 - 08.30 a.m.	- Departure to Cabinet of Thourakhom district health office	- To meet the chief of the cabinet of district health	
-8.30 – 12.00 a.m.	- The field visit of Thourakhom district, village Siboungheua Tai in one day : - visit, observe the immunization services of MCH service of ZZSMS, interview the vaccinators, interview the mothers (5 persons), control the vaccination card, Focus Group Discussion with 8-10 women, interview the committee members of village and one outreach immunization service.	Go to visit one urban or rural district (the representatives estimate for each is average 30% by random sampling).	-District Health cabinet
	- Interview the Manager of EPI, Logistic, cold chain, equipment, vaccine supply and quality, injection safety, waste disposal, transportation.	Health cabinet of district	
	-Interview Chief of MCH service and chief of Epidemiology unit of district.	MCH	
-13.00-14.30.00 p.m	- Field visit to Thourakhom district, Boungphao village and Health Center: - Visit, observe the immunization		

-14.40-16.00 p.m.	services of MCH service of ZZSMS, interview the vaccinators, interview the mothers (5 persons) control the vaccination card, Focus Group Discussion with 8-10 women, interview the committee members of village and one out reach immunization service. Back to Vientiane		

Luangphrabang Province

Sun 24.10.04	-Departure to LPB province		
Mon 25.10.04			
-08.15- 08.30 a.m.	- To DPH	-To meet The Director of the Department of Health (DPH) - To discuss the objective and work plan for the next 2 days. - Provincial Hospital	- DPH
- 08.30-09.30a.m.	-Visit MCH service at provincial hospital ZZSMS	-DPH	-Provincial Hospital
-09.40-12.00 a.m.	- Interview EPI manager at provincial level	-DPH	-DPH
- 13.30-14.30 p.m.	-Interview chief of MCH of DPH		- DPH

-14.30- 15.20 p.m.	-Interview EPI staff responsible for logistics	-DPH	- DPH
-15.30-16.00 p.m	- Interview chief of Epidemiology of unit Epidemiology in province	- DPH	- DPH
Tues 26.10.04 :			
-07.30 - 08.30 a.m.	- Departure to District Health cabinet in Chomphet district	- To meet the chief of the district health cabinet	-District Health cabinet
-8.30 – 12.00 a.m.	- visit, observe the immunization services of MCH service of ZZSMS, interview the vaccinators, interview the mothers (5 persons) control the vaccination card. - Interview the Manager of EPI, Logistics, cold chain, equipment, vaccine supply and quality, injection safety, waste disposal, transportation. -Interview Chief of MCH service and chief of Epidemiology unit of district.	Visit 1 district for 2 days (the representative people estimated for 1 district is average 30% by random sampling).	
-13.00-16.00 p.m	Leave for Nongphuk village Visit Health center Focus Group Discussion with 8-10	Visit 1st village in Chomphet district	Health center Villagers

-16.30 p.m.	women, interview the committee members of village and one outreach immunization service. Leave the district		
-Wed. 27.10.04 : -07.30 – 9.00 a.m -9.00 – 11.00 a.m. -11.00-15.00 -13.00-16.00 p.m	 Leave for Houayoone village Visit Health Center Focus Group Discussion with 8-10 women, interview the committee members of village and one out reach immunization service. Leave the district.	 Visit 2nd village in Chomphet district	 Health center Villagers
Thus 28.10.04 : -07.30 - 08.30 a.m. -8.30 – 12.00 a.m.	 - Departure for health cabinet in Pak Ou district - Visit, observe the immunization services of MCH service of ZZSMS ,interview the vaccinators, interview the mothers	 - Meet the chief of the district health cabinet Go to visit 1 district for 2 days.(the representative people estimated for each district is	 -District Health cabinet

	(5persons) control the vaccination card. Interview the Manager of EPI, Logistics, cold chain, equipment, vaccine supply and quality, injection safety, waste disposal, transportation. Interview Chief of MCH service and chief of Epidemiology unit of district.	average 30% by random sampling).	
-13.00-16.00 p.m -16.30 p.m.	Leave to Khonekham village Visit health center Focus Group Discussion with 8-10 women, interview the committee members of village and one outreach immunization service. Leave the district.	Visit 1st village in Pak Ou district	 Health center Villagers
-Fri. 29.10.04 : -07.30 – 9.00 a.m -9.00 – 11.00 a.m.	Leave for Hadkho village Visit Health Center	Visit 2nd village in Pak Ou district	-District Health cabinet Health center

-11.00-15.00 -15.00-16.00 pm	Focus Group Discussion with 8-10 women, interview the committee members of village and one outreach immunization service. Leave the district.		Villagers
Sat.30.10.04	Back to Vientiane		

Champasak Province

Sun 31.10.04	-Departure to Champasak province		
Mon 1.11.04			
-08.30-09.45 a.m.	- Visit DPH	-To meet The Director of the Department of Health(DPH) - To discuss the objective and work plan for the next 2 days. - Provincial Hospital	- DPH
-10.00-11.00a.m.	-Visit MCH service at provincial hospital ZZSMS	-DPH	-Provincial Hospital
-11.00-12.00 a.m.	- Interview EPI Manager at provincial level	-DPH	-DPH - DPH
- 13.30-14.30 p.m.	-Interview chief of MCH of DPH	-DPH	
-14.30- 15.20 p.m.	-Interview EPI staff responsible for logistics	-DPH	- DPH
-15.30-16.30 p.m	- Interview chief of Epidemiology of unit Epidemiology in province		-DPH
Tues 02.11.04 :			
-07.30 - 08.30 a.m.	- Departure to District Health cabinet (Phonethong)	- To meet the chief of the District Health cabinet	- District Health cabinet

-8.30 – 12.00 a.m. -13.00-16.00 p.m -16.00 p.m.	- visit, observe the immunization services of MCH service of ZZSMS ,interview the vaccinators, interview the mothers (5 persons) control the vaccination card - Interview the Manager of EPI, Logistics, cold chain, equipment, vaccine supply and quality, injection safety, waste disposal, transportation. -Interview Chief of MCH service and chief of Epidemiology unit of district. Leave for Phone sang village Visit Health center Focus Group Discussion with 8-10 women, interview the committee members of village and one outreach immunization service. Leave the district	Visit 1st village in Phonethong district	Health center Villagers
-Wed. 03.11.04 : -07.30-9.00 a.m -9.00 – 11.00 a.m.	Leave for Ousu village Visit Health Center	Visit 2nd village in Phonethong district	Health center

-11.00-15.00 -15.00-16.00 p.m	Focus Group Discussion with 8-10 women, interview the committee members of village and one outreach immunization service. Leave the district.		Villagers
Thus 04.11.04 : -07.30 - 08.30 a.m. -8.30 – 12.00 a.m. -13.00-16.00 p.m	- Departure to District Health cabinet in Khong district - visit, observe the immunization services of MCH service of ZZSMS ,interview the vaccinators, interview the mothers (5persons) control the vaccination card. Interview the Manager of EPI, Logistics, cold chain, equipment, vaccine supply and quality, injection safety, waste disposal, transportation. Interview Chief of MCH service and chief of Epidemiology unit of district. Leave for Houa Khong village	- To meet the chief of the District Health cabinet Visit 1st village in Khong district	- District Health cabinet

	Visit health center Focus Group Discussion with 8-10 women, interview the committee members of village and one outreach immunization service. Leave the district.		Health center Villagers
-16.30 p.m.			
-Fri. 05.11.04 :			
-07.30 -9.00 a.m	Leave for Khinak village	Visit 2nd village in Khong district	- District Health cabinet
-9.00 – 11.00 a.m.	Visit Health Center		Health center
-11.00-15.00	Focus Group Discussion with 8-10 women, interview the committee members of village and one outreach immunization service.		Villagers
-13.00-16.00 p.m	Leave the district.		
Sun.7.11.04	Back to Vientiane		
8.11.04 onward	Report writing		

ANNEX 4

LIST OF INTERVISWEES – PERSON CONSULTED

Annex 4: List of Persons Interviewed

At central level:

- Dr. Somthana Douangmala, National EPI Manager, Deputy Director of CMCH, Associate Professor.
- Dr. Phengta Vongphachanh, Director of Surveillance Disease Project, Deputy Director of NCLE.
- Dr. Chansay Pattammavong, Chief of ZZSMS, EIP Section, CMCH, MOH.
- Dr. Chanthavong Savathchilang, Chief of planning and budgeting unit, Cold-Chain, CMCH, MOH
- Dr. Kongxay Phounphenghack, Chief of logistic Unit, EPI Section, CMCH, MOH
- Dr. Samlane Phomphida, Director of Center of Malariaology, Parasitology and Entomology(CMEP), President of the National Committee for the Certification of Polio-Eradication(NCCPE).
- Dr. Anothay Kongsayasak, Director of CIEH, MOH
- Dr. Manivong Khaiyavong, member sub-committee of ZZSMS, CIEH
- Dr. Phengsy Phongmani, Chief of EPI Unit, ZZSMS of Mother and Child Hospital (central level).

Donors:

- Dr. Graig Wilson, EIP Expert of WHO, EPI Section.
- Dr. Bounsavay Meksavanh, Assistant EPI Program Officer fpor EPI, UNICEF
- Ms. Jane Davies, Program Officer Development Cooperation Sector, AUS-AIDS
- Dr. Somthana Douangmala, GAVI Information.

Members of Committee of Mother and Child:

- Mrs. Souphaphone, Director of the crèche and kindergarten, Department of General Education, MOE:
- Mrs. Bouaphone Daraseng, Director of the Department of Interests of Mother and Children, Lao Women Union and Mrs. Khamla Saysombat, Assistant

Local level:

1) Vientiane province:

- Provincial Department of Health (PDOH):

- Dr. Thong Liane Singnot, Deputy Director of the Department of Provincial Health (PDOH)
- MA Vilat Phytheng, Provincial EPI Manager, PDOH.
- MA Keo Somlaphone, EPI staff in charge of Logistics and Cold-Chains, PDOH.
- MA Phouvieng, technical staff of MCH/EPI service, responsible for Birth Spacing, PDOH.

- MA. Khoutlavanh, Chief of Epidemiology Unit, Hygiene and Epidemiology Service, PDOH.
- Mrs Bounlap Somchanmavong, Chief of nurses of MCH, Obstetric-Gynecology ward, responsible also for EPI of the provincial hospital, ZZSMS at provincial level.

- Thoulakhom District Cabinet of Health (DCOH)

- Dr. Khamphong Soukaloun, Chief of DCOH.
- Mr. Ding, Nurse,District EPI Manager, Logistics and Cold Chains, DCOH.
- Dr. Soulivanh Vongsay, Head of MCH district, DCOH.
- Mrs Saykeo Somsisay, Deputy Head of PLWU,
- Mrs Chanthaboun Phonesilath, Deputy Chief of PLWU.
- Mrs. Thonekeo Phanthanavong, Director of General Education of Vientiane.
- Mrs. Khamdeng Choundara, Nurse, Deputy Chief of Health Center Ban Boungphao, responsible of EPI.

- Sibounhuang Kane village:
**** Committee Head of Village (or Ban):***

- Mr. Oday Souvanhthong, Head of Sibounhuang Kan village, Keuntai group, responsible overall.
- Mr.Seng Chanh Rajkoun, Second Deputy Head of village, in charge of health/socio-cultural aspects.
- Mr. Khamdy Saysana, First Deputy Head of village, responsible for economic aspects.

**** Focus Group Discussion (FGD) 12 women which have children under 2 year old.***
**** Chief of Lao Women's Union (VLWU).***

- Ban Boungphao :
**** Committee Head of Village***

- Mr. Bounthong Kongpane, secretariat of party, acting head of village (not officially selected) and his assistants.

**** FGD 2 women have children <2y old.***

2) Louangprabang province:

- Provincial Department of Health (PDOH):

- Dr. Ammone, PDOH,
- Dr. keanechanh, Provincial acting Head of MCH/EPI service, Provincial EPI Manager.
- Dedical Assistant (MA). Bounpheng, Finance staff of MCH/EPI service.
- MA. Bounpheng, Head of epidemiology Unit, PDOH
- Mrs. ThongLiane Singthilat, MCH Vaccinator of ZZSMS of LPB provincial Hospital.
- Provincial LWU: Mrs. Vanhthong Yommaly, Head of PLWU.

- Provincial General Education service: Mr. Eunh Nosavanh, Deputy Head of Provincial Department

- Chomphet District Cabinet of Health:

- MA. Chansy Sisag, Head of District Cabinet of Health (DCOH)
- Mr. Phayvanh Phanhthasinh (nurse), District EPI Manager, Surveillance Disease, Logistic-Cold-Chain.
- Mrs Phayvanh Phasouk, Head of DMCH, ZZSMS of Chomphet District Hospital.
- Mrs Amphay Bounnolack, nurse, vaccinator of district hospital.
- Mr. Bounthong in charge of phony
- Mrs. Somphin Sayalath, Chomphet DLMWU.
- MR. Khunh Phanthanalay, Chief of Nongphouk village Health Center, overall responsible.
- Ms. Chansouk Phanhthachack (nurse who studied 2 years in LPB), in charge of drugs.
- Ms. Chanhmaly, (nurse who studied 2 years in LPB), in charge of MCH/EPI.

** Committee Head of Nongphouk village:*
- Mr. Khamdy Head of village(HV)
- Mr Phonesay, Deputy HV(DHV) responsible for health/socio-cultural aspects.
- Mr. Lo Ou, DHV, responsible for economic aspects.

** FGD: 9 women (C. < 2y).*
** Mrs Chanthy, Head of VLWU.*

Committee Head of Houa Oane village:
- Mr. Sombat Taravay, Head of village
- Mrs. ThongKhoune,DHV, responsible for economic aspects.
- Mr. Say in charge of health/socio-cultural aspects.

** FGD: 7 women (C<2y)*
** Mrs. Bouasone, HVLWU.*

- **Pak Ou District Cabinet of Health** (DCOH) :
- Mr. Khampheun Phommasith, Head of DCOH,
- Mr. Bounpanh Nosavanh, Deputy Head of MCH/EIP unit, responsible for EPI.
- MA. Laddavanh, Head of MCH, Pak Ou district.
- Mrs Bouavanh, nurse, vaccinator of MCH Section.(DCOH).
- Mrs. Phonesavanh Vongsouriya, Epidemiology unit.
- Mr. Angkham Bounkeomany, Deputy Chief of General Education service.

** Committee Head of Khonekham Village:*
- Mr. Mayhoung, Head of village.
- Mr. Pheng, DHOV, responsible for economic aspects.
- Mr. E Vanhnitthavong, DHOV, health/socio-cultural aspects.

** FGD: 4 women (C<2y)*
** Vice HLWUV.*

** Committee Head of Ban HatKho village:*

- Mr.Keo Padithyadeth, Deputy Head of village. He is in charge of economic aspects, which he knows superficially. The DHOV who is responsible for health was absent.

** FGD : 6 women(C<2y).*

** Mrs.Oone, HLWUV.*

3) Champasack province

- Provincial Department of Health:

- Mr. Thongsa Saly, Deputy Director of PDOH.
- Dr. Baramy Soukaloun, Provincial EPIU Manager, Deputy Head of MCH/EIP Service of PDOH.
- Dr. Vimounthanh Kaseumsouk, Head of MCH Service of PDOH.
- MA. Vilaysack Samonti, Deputy Head of Epidemiology Unit.
- Dr. Phouangmala Phosay, Head of Mother and Child Service of Provincial Hospital CPS, provincial ZZSMS.
- Mr. Thongphuang Sayavongsa, Deputy Director of General Educution, CPS.
- Mrs Kenechanh Boualaphangsay, HPLWU, CPS.

- Phonhthong District Cabinet of Health:

- MA. Phouvong Soukhom, Head of District Cabinet of Health (DCOH or DOH)
- MA. Souphy Syounhuane, EPI Manager of DCOH.
- MA.Davanh Sengmany, MCH section, DCOH.
- Mr. Viengxay Noujaksa, Epidemiology Unit.
- MA. Kesone Kittiphanh, Head of Health Center.

** Committee Head of Phonhsanh(PS) village:*

- Mr. Samane Keosopha, Head of village PS.
- Mr. Samly Chounnaphong, Deputy HPSV, responsible economic aspects.
- Mr. Thongsy Thongkeo, HPSV, in charge of health/socio-cultural aspects.

** FGD: 8 women (C.<2y)*

- MA. Phouma Muanethep, Head of Health Center Kokgnang(KG)

** Committee Head of village Ousu (O).*

- Mr. Sath, HOV.
- Mr.Siane, DHOV, economics.
- Mr.Seth, DHOV, health/socio-cultural aspects.

** FGD: 8 women (C.<2y)*

** Mrs Khottamy Kkhamphousoung, HLWUOV*

- Khong (K) District Cabinet of Health:

- Mr. Souban Khanthavong, DCOH
- Mr. Bounmy Saorivong, nurse, EIP manager, DCOH.
- Mrs. Khampheng Phommaseng, nurse, Head of MCH Unit, DCOH.
- Mrs. Boulay Boutsaba, Head of DLWU.
- Mr. Nouhack Sivavong, Head of district General Education.
- Mr. Phonesavanh Bouphamany, Head of HC Phonethong.

** Committee Head of Ponesanh village:*

- Mr. Phout Douangthongkham, Head of HKV.
- Mr. Somsavinh, DHKTV, health/socio-cultural aspects.
- Mr. Moun, DHKTV, economic aspects.

** FGD: 7 women(C.<2y).*

- Mr. Phouvanh Khangnavong, Head of HCK.

** Committee Head of village:*

- Mr. Sang, HKV.
- Mr. Sisinhban, DHKV, economic.
- Mr. Nou, DHKV, Health and socio-cultural.

List of Persons Consulted

- Ms. SHINOBU MAMIYA, Researcher Institutional Development & International Health, GLM (Global Link Management.)
- Ms. HORIBE Ritsuko, Project formulation Advisor, JICA Laos Office
- Mr. Anolack Chanpasith, Assistant Program Officer, JICA Laos Office
- Dr. MIYOSHI Chiaki, Adviser to Ministry of Health, Health and Medical Cooperation Planning.
- Mrs. Buakhai Phimmavong, Managing Partner - Consultant, Enterprise & Development Consultants Co., LTD.

ANNEX 5

REFERENCE

Annex 5: Reference

MAIN SOURCE	NAME OF DOCUMENTS, PEOPLE OR ORGANIZATION	Remarks
Project Document and Logical Framework (LogFrame)	- Attached in the Terminal Evaluation Report, 2001.	Formulation in 1998 and revised in 2000
Mission reports by the long term and short term experts, monitoring reports, relevant correspondence of the Project concerned	- Minutes of Discussions (and attached documents) between Japanese Preliminary Study Team and the concerned Lao authorities of PIDP Project in Jan. 1998. - M./D between the Japanese Management Consultation Team and the concerned authorities of GOL for PIDP Project in Oct. 1999 - Terminal Evaluation Report in May 2001 and Excerpts from JICA Annual Evaluation Report 2001 (Summary Sheet)	
Counterpart	**EPI Section, CMCH, MOH :** - National Policy on the Logistics and Cold Chain of the National EPI Project (Review from 1996 in Jun 2001.) - Structure and EPI/MCH staff number at provincial and district level. - % of distribution of village by zone in 2001-2003. -Guidelines for refresher course for EPI Project manager/MCH ZZSMS at provincial and district level on the policy and strategies focused on in the new period, and role and responsibilities, Jun 2001. - Immunization in Practice, August, 1999 - Some recommendations on the organization function of EPI- ZZSMS. - National Plan of Action of Sub-National Immunization Days, 2000, Lao PDR. - National Annual EPI Plans and Budgeting in 2001-2003. - National annual statistics data in 2001-2003. - Supervising and monitoring form of 9 main activities of EPI.	

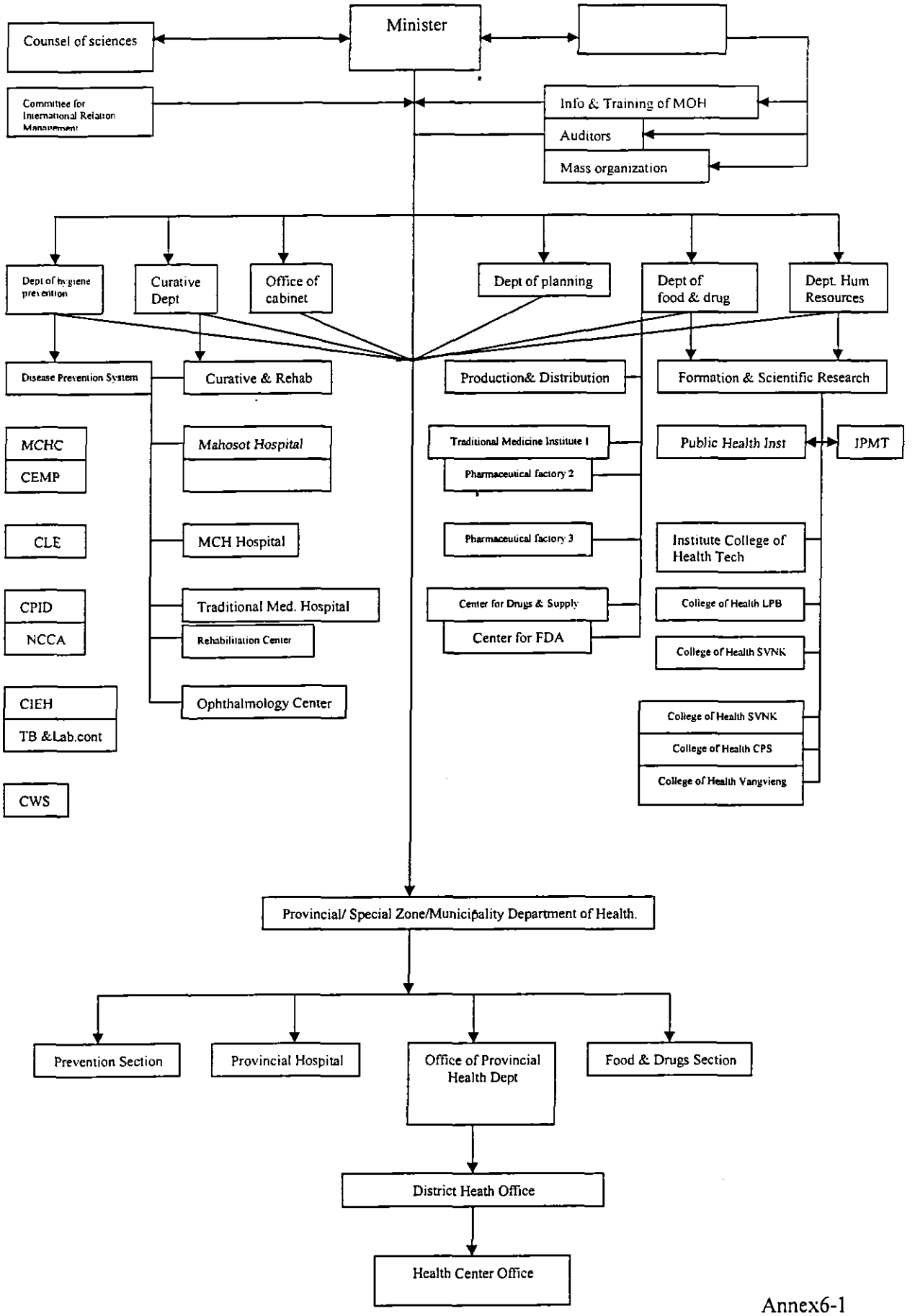
	Disease Surveillance Section, NCLE : - Surveillance of infectious diseases target of EPI, especially AFP and measles. - The curricula of the training of health staff and general treatments staff at provincial and district level on - Guidelines of the Training on Polio-Eradication. 1996. - Guidelines of Epidemiology and Clinical Control of Poliomyelitis – Eradication 1996. - Guidelines of the Monitoring and Control in Epidemiology.1996. - Guidelines of the Monitoring and Control of Neonatal –Tetanus, Measles and Cholera. 1996. - Guidelines for the Training of the Health Staff at Provincial and District level. April 10th, 2003. - 3 kinds of reporting forms - Weekly Report on Monitoring and Clinical Control in Epidemiology - National Annual Report of Disease Surveillance (especially target disease of EPI/ AFP and measles).	
Relevant Ministries and Agency(s), etc.	- Five years Plan Cooperation between Lao Government and UNICEF. 2002-2006. - Immunization Services, Assessment Guidelines. WHO. - Training manual on management of human resource for health, World Health Organization, Geneva, WHO/EDU/93.201.	
Others	- JICA's Technical Cooperation for the National Tuberculosis Control Project Phase II - (Sample report for Ex-Post Evaluation) - Vaccine Management Project in the Union of Myanmar- Assessment of Knowledge and Practices for July 8 to 31, 2002, WHO SEARO. - WHO AFRO/ATT, Vaccine Management Project Assessment and tools guidelines.	

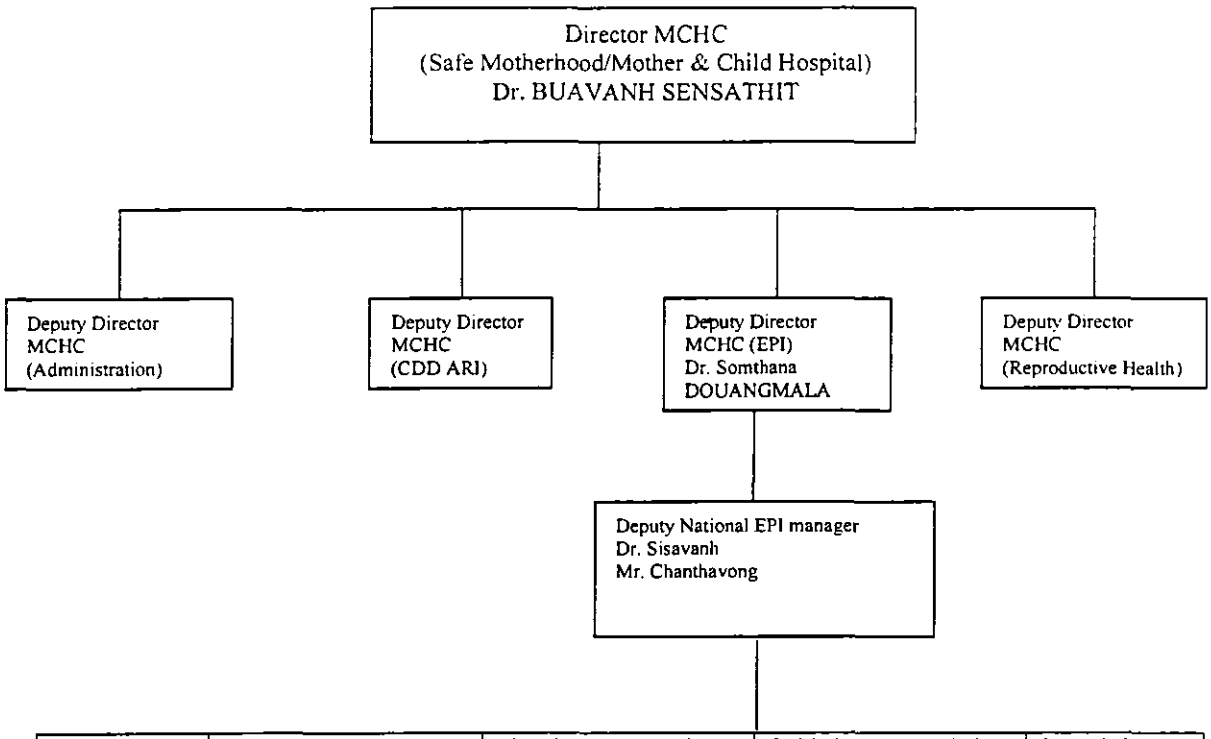
	- Sample of Morrocco Report. - Adventure in Immunization and Health through Participatory Learning and Action (PLA) - Cooperation between the Ministry of Health and UNICEF. - 5- year Plan Cooperation between Lao Government and UNICEF 2002-2006.	

ANNEX 6

ORGANIZATION CHART OF THE MINISTRY OF HEALTH

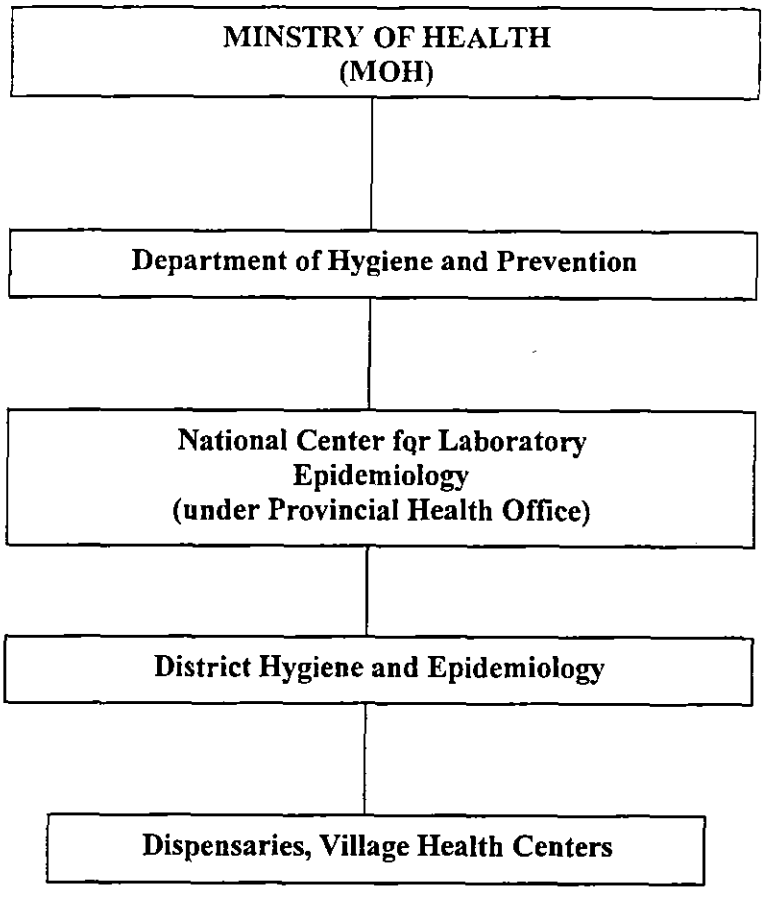
Annex 6- MOH Organizational Structure





	Administration Fax.(021)-31-2120	Planning & Financing Fax.(021)-35-0067	Cold chain & Logistics	Zone 0 & IEC
	Tel.(021)-31-5360-1,2352		Tel.(021)-31-2352	
Chief	Dr. Somvang	Dr. Sisavanh Mr. Chanthavong	Dr. Kongxay	Dr. Chansay
Deputy chief	Mre. Hongkham	Ms. Buavanh	Dr. Thonglham	Dr. Amlian Dr. Anousone
Staff	Ms. Pathouphone Mr. Khamphat Mr. Vixay Mr. Sisouved Mr. Saysamone Mr. Pankham Ms. Sengthong	Mr. Douangphachanh Mr. Viengvilay Ms. BAngone	Dr. Vilaned Dr. Somneuk Mr. Khamphet Mr. Kapkeo Mr. Vilasak JICA /Mr. Tomiyasu RAIO EQUIPMENT SERVICE CENTER Tel.(021)-35-0315 Fax.(021)-31-2120	Ms. Khanthaly

Address
Mother and Child Health Center (EPI)
Vientiane, Km3 Thadeua road
Lao P.D.R


MINSTRY OF HEALTH
(MOH)
Department of Hygiene and Prevention
National Center fqr Laboratory
Epidemiology
(under Provincial Health Office)
District Hygiene and Epidemiology
Dispensaries, Village Health Centers