Global Alliance for Vaccines and Immunisation (GAVI)

APPLICATION FORM FOR COUNTRY PROPOSALS

For Support to:

Immunisation Services, Injection Safety
and New and Under-Used Vaccines

Revised 15 January 2008

(To be used with Guidelines dated 15 July 2007)

Please return a signed copy of the document to:
GAVI Alliance Secretariat; c/o UNICEF, Palais des Nations, 1211 Geneva 10, Switzerland.

Enquiries to: Dr Ivone Rizzo, irizzo@gavialliance.org or representatives of a GAVI partner agency. All documents and attachments must be in English or French, preferably in electronic form.

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Executive Summary

The Government of Lao PDR seeks financial assistance with the introduction of Hib vaccine in the form of fully liquid single-dose DTP-HepB-Hib pentavalent vaccine from the GAVI alliance starting from July 1, 2009.

WHO has recently estimated that in Laos PDR almost 4.1% of total under-5 deaths can be attributed to Hib infection (pneumonia and meningitis). Based on these WHO estimates, Hib is estimated to cause 230 cases of meningitis, 11521 cases of severe pneumonia and 39 cases of non-pneumonia and non-meningitis cases in Laos PDR each year. Hence introduction of Hib vaccine is likely to make substantial contribution to achievement of MDG-4 goal in Lao PDR.

The pentavalent vaccine is proposed to replace the current tetravalent vaccine (DPT-HepB) which was earlier introduced with GAVI support in 2002. The pentavalent vaccine is proposed to be introduced nationwide starting from July 1, 2009 in a three dose schedule at 6 weeks, 10 weeks and 14 weeks of age to all the infants in addition to provision of monovalent hepatitis B birth dose within 24 hours of birth. Government commits itself to co-finance the cost of pentavalent vaccine at the rate of $0.20 per dose as applicable to Lao PDR as per the current GAVI co-financing policy. The cold chain capacity analysis at different levels has shown sufficient capacity to accommodate the new vaccine introduction in single-dose vials. In addition, introduction of single dose vials is likely to greatly reduce the vaccine wastage (40% estimated with current tetravalent vaccine) and improve the quality of immunization delivery. A detailed vaccine introduction plan has been prepared including training, IEC and surveillance. Government plans to procure the pentavalent vaccine through UNICEF procurement system in two shipments each year. The co-financing payments will be released by government to UNICEF at the time of placement of order for the second shipment for the vaccine supply.

The proposal for Hib vaccine introduction has been reviewed and endorsed by both the Technical Working Group (TWG) and Inter-agency coordinating committee (ICC). Signatures of members of the Interagency Coordinating Committee along with minutes of the meeting are also enclosed. Immunization Program data and summary information from the forecasted immunization budget from 2007-2011 is also enclosed.

2. Signatures of the Government and National Coordinating Bodies

Government and the Inter-Agency Coordinating Committee for Immunisation

The Government of **Lao PDR** would like to expand the existing partnership with the GAVI Alliance for the improvement of the infant routine immunisation programme of the country, and specifically hereby requests for GAVI support for **introduction of Hib containing pentavalent vaccine (DPT-HepB-Hib).**

The Government of **Lao PDR** commits itself to developing national immunisation services on a sustainable basis in accordance with the comprehensive Multi-Year Plan presented with this document. The Government requests that the GAVI Alliance and its partners contribute financial and technical assistance to support immunisation of children as outlined in this application.

Table N°**6.5** of page **18** of this application shows the amount of support in either supply or cash that is required from the GAVI Alliance. Table N° **6.4** of page **18** of this application shows the Government financial commitment for the procurement of this new vaccine (NVS support only).

"Following the regulations of the internal budgeting and financing cycles the Government will annually release its portion of the co-financing funds in the month of October. The payment for the first year of co-financed support will be around October 2009."

Minister of Health:

Signature: ……

Name: Dr. Ponmek Daraloy

Date: ……

Minister of Finance:

Signature: ……

Name: ……

Date: ……

National Coordinating Body - Inter-Agency Coordinating Committee for Immunisation:

We the members of the ICC/HSCC[1] met on the 26 March 2008 to review this proposal. At that meeting we endorsed this proposal on the basis of the supporting documentation which is attached.

- The endorsed minutes of this meeting are attached as DOCUMENT NUMBER: **4**

Name/Title	**Agency/Organisation**	**Signature**
Dr. Laila Ismail Khan	**UNICEF**	
Dr. Dong il Ahn	**World Health Organization**	
	JICA	
	World Bank	
	Asian Development Bank	

In case the GAVI Secretariat has queries on this submission, please contact:

Name: Dr. Anonh Xeuatvongsa Title: National EPI manager

[1] Inter-agency coordinating committee or Health sector coordinating committee, whichever is applicable.

Tel No.: 856-21-312352 Address: National Immunization Program

Fax No.: 856-21-312120 3rd Km, Thadeua Road
Vientiane, Lao PDR

Email: anonhxeuat@yahoo.com ……

The GAVI Secretariat is unable to return documents and attachments to individual countries. Unless otherwise specified, documents may be shared with the GAVI partners and collaborators.

The Inter-Agency Coordinating Committee for Immunisation

Agencies and partners (including development partners and CSOs) supporting immunisation services are co-ordinated and organised through an inter-agency coordinating mechanism (ICC/HSCC). The ICC/HSCC is responsible for coordinating and guiding the use of the GAVI ISS and NVS support. Please provide information about the ICC/HSCC in your country in the spaces below.

Profile of the ICC/HSCC

Name of the ICC**: Inter-Agency Coordination Committee on immunization** (ICC)

Date of constitution of the current ICC: 1992

Organisational structure (e.g., sub-committee, stand-alone): **stand-alone**

Frequency of meetings: **Every 3-4 months or more often if required**

Composition:

Function	**Title / Organization**	**Name**
Chair	MOH	Dr. Ponmek Dalaloy
Secretary	MCH/EPI	Dr. Anonh Xeuatvongsa
Members	• WHO • UNICEF • JICA • ADB • World Bank • Curative Department • Planning and budgeting Department • Hygiene and Preventive Department	• Dr. Dong Il Ahn • Dr. Laila Ismail khan • Dr. Asoaka Hiroaki • Dr. Pasongsith Boupha • Dr. Sisamone Keola • Dr. Chanphomma • Mr. Khampheth • Dr. Somchith Akkhavong

Major functions and responsibilities of the ICC:
-Coordinating partner agencies inputs to immunization
-Providing feedback to the MOH to national EPI policies, plans and their implementation
-Identifying solutions and recommendations to solve problems and constraints encountered
-Mobilizing resources

Three major strategies to enhance the ICC's role and functions in the next 12 months:

1. To conduct routine meetings at least four times a year to regularly monitor the implementation of c-MYP.
2. To regularly communicate recommendations from technical working group to all ICC members.

3. Communicate detailed agenda notes and sharing them with all the background papers to all ICC member in advance of the meeting. .
4. Review membership of ICC and strengthen partner representation to Health Sector Coordination Committee..

3. Immunisation Programme Data

Please complete the tables below, using data from available sources. Please identify the source of the data, and the date. Where possible use the most recent data, and attach the source document.

- Please refer to the Comprehensive Multi-Year Plan for Immunisation (or equivalent plan), and attach a complete copy (with an executive summary) as DOCUMENT NUMBER **3**

- Please refer to the two most recent annual WHO/UNICEF Joint Reporting Forms on Vaccine Preventable Diseases and attach them as DOCUMENT NUMBERS # **1 (2005) and # 2 (2006**)

- Please refer to Health Sector Strategy documents, budgetary documents, and other reports, surveys etc, as appropriate.

Table 3.1: Basic facts for the year **2006** (the most recent; specify dates of data provided)

	Figure	**Date**	**Source**
Total population	5,621,982	01/03/2005	National Statistic Centre (National census,2005)
Infant mortality rate (per 1000)	70	01/03/2005	National Statistic Centre (National census,2005)
Surviving Infants*	180,634	2006	Based on population projection, National Statistic Centre (National census,2005)
GNI per capita (US$)	$500	2006	World Development Indicators Database, World Bank, as published in September 2007
Percentage of GDP allocated to Health	0.68%	21/03/2006	Public information notice No.06/31, Government of Laos
Percentage of Government expenditure on Health	4.32%	21/03/2006	Public information notice No.06/31, Government of Laos

* Surviving infants = Infants surviving the first 12 months of life

Please provide some additional information on the planning and budgeting context in your country:

Please indicate the name and date of the relevant planning document for health

1. Lao PDR National Health Plan (2006-2010)
2. Lao PDR Child Survival Policy
3. Sixth National Socioeconomic Development Plan (NSEDP) (2006-2010), promulgated in early half of 2006
4. Health Strategy to year 2020, promulgated by VIIth Party congress in 2001

Is the cMYP (or updated Multi-Year Plan) aligned with this document (timing, content etc)

cMYP (2007-2011) is aligned with both NSEDP and Health Strategy to year 2020, both of which prioritize Immunization along with maternal and child health promotion. Community-based health

promotion and disease prevention is one of the six health development policies articulated in Health Strategy to year 2020, which is the lynchpin of this c-MYP for immunization program.

Please indicate the national planning budgeting cycle for health
While there are multiyear plans and policies for overall health sector as well as for individual programs, annual budget for each department including health is finalized by national assembly in the month September. Each unit/program within health sector has to prepare its annual plan and budget by July and sent for approval to August. The financial year runs from 1 October to 30th September.

Please indicate the national planning cycle for immunisation

The national immunization program planning cycle is every 5 years. The current cycle is 2007-2011. In addition, detailed annual work plans are prepared each year in the month of October in consultation with all the partners based on five-year multiyear plan.

Table 3.2: Current Vaccination Schedule: Traditional, New Vaccines and Vitamin A Supplement *(refer to cMYP pages)*

Vaccine *(do not use trade name)*	**Ages of administration** *(by routine immunisation services)*	**Indicate by an "x" if given in:**		**Comments**
		Entire country	**Only part of the country**	
HepB0	<24 hours		X	Though birth dose is included in national immunization schedule, it is currently only provided in national and few provincial hospitals. Will be expanded to all provincial hospitals and district hospitals in 2008. But systems yet to be developed for almost 75% of home births.
BCG	0 – 11 months	X		
OPV1, DPT-HepB1	6 weeks	X		
OPV2, DPT-HepB2	10 weeks	X		
OPV3, DPT-HepB3	14 weeks	X		
MSV	9 – 11 months	X		
Vit A 100,000 IU	6 – 11 months	X		Semi-annually in campaigns
Vit A 200,000 IU	12 – 59 months	X		Semi-annually in campaigns.
Vit A 200,000 IU	one time within 6 weeks of delivery	X		

Table 3.3: Trends of immunisation coverage and disease burden
(as per last two annual WHO/UNICEF Joint Reporting Form on Vaccine Preventable Diseases)

Trends of immunisation coverage (in percentage)						Vaccine preventable disease burden		
Vaccine		Reported		Survey		Disease	Number of reported cases	
		2006	2007	2000	2006		2006	2007
BCG		56	56	56.1	61	Tuberculosis*	na	na
DTP	DTP1	71	59	45.7	60	Diphtheria	2	2
	DTP3	59	50	22.3	33	Pertussis	182	13
Polio 3		58	46	23.8	33	Polio	0	0
Measles (first dose)		50	40	28.6	33	Measles	58	1,680
TT2+ (Pregnant women)		34	26	na	Na	NN Tetanus	8	15
Hib3		NA	NA	NA	NA	Hib **	NA	NA
Yellow Fever		NA	NA	NA	NA	Yellow fever	NA	NA
HepB3		59	50	na	33	hepB sero-prevalence*	na	Na
Vit A supplement	Mothers (<6 weeks post-delivery)	Na	Na	13	Na			
	Infants (>6 months)	46 (2nd dose)	Na	28.5	Na			

* If available
** Note: JRF asks for Hib meningitis

If survey data is included in the table above, please indicate the years the surveys were conducted, the full title and if available, the age groups the data refers to:Multiple Indicator Cluster Survey (MICS) 2000 (UNICEF), can be assessed at www.childinfo.org; nationwide survey, the coverage refers to children 12-23 month of age at the time of survey vaccinated any time prior to survey.Multiple Indicator Cluster Survey (MICS) 2006 (UNICEF) the coverage refers to children 12-23 months of age at any time prior to the survey.

Table 3.4: Baseline and annual targets *(refer to cMYP pages)*

Number	Baseline and targets					
	Base year (2006)	Year 1 2007	Year 2 2008	Year 3 2009	Year 4 2010	Year 5 2011
Births	**193647**	**191323**	**189287**	**187595**	**186283**	183480
Infants' deaths	13013	12321	11698	11106	10544	9617
Surviving infants	**180634**	**179002**	**177589**	**176490**	**175739**	**173554**
Pregnant women (births*1.1)	213012	210455	208216	206355	204911	201828
Target population vaccinated with BCG	123,522	106,398	160,894	163,208	167,655	168,802
BCG coverage*	64%	56%	85%	87%	90%	92%
Target population vaccinated with OPV3	106,403	82,750	142,071	144,722	149,378	156,199
OPV3 coverage**	59%	46%	80%	82%	85%	90%
Target population vaccinated with DTP3***	106,403	90,311	142,071	144,722	149,378	156,199
DTP3 coverage**	59%	50%	80%	82%	85%	90%

Target population vaccinated with DTP1***		127,940	105,900	150,951	153,546	158,165	159,670
Wastage[1] rate in base-year and planned thereafter		40%	40%	40%	5%	5%	5%
Target population vaccinated with **3rd dose** of DPT-Hepb-Hib3		0	0	0	72,361	149,378	156,199
DPT-Hepb-Hib3 Coverage**		0%	0%	0%	41%	85%	90%
Target population vaccinated with **1st dose** of DPT-HepB-HIB..		0	0	0	76,773	158,165	159,670
Wastage[1] rate in base-year and planned thereafter		0%	0%	0%	5%	5%	5%
Target population vaccinated with **1st dose** of Measles		90,630	70,989	142,071	144,722	149,378	156,199
Target population vaccinated with **2nd dose** of Measles		na	Na	Na	na	Na	Na
Measles coverage**		50%	40%	80%	82%	85%	90%
Pregnant women vaccinated with TT+		65,273	50,666	145,751	144,448	153,683	161,463
Vit A supplement	mothers(<6wks from delivery)	NA	NA	NA	NA	NA	NA
	Infant (>6 mo of age)	46%	60%	70%	80%	80%	85%
Annual DTP Drop out rate [(DTP1-DTP3)/DTP1] x100		17%	7%	6%	6%	6%	2%
Annual Measles Drop out rate (for countries applying for YF)		NA	NA	NA	NA	NA	NA

* Number of infants vaccinated out of total births
** Number of infants vaccinated out of surviving infants
*** Indicate total number of children vaccinated with either DTP alone or combined
**** Number of pregnant women vaccinated with TT+ out of total pregnant women

Table 3.5: Summary of current and future immunisation budget *(or refer to cMYP pages)*

	Estimated costs per annum in US$ (,000)					
Cost category	**Base year 2006**	**Year 1 2007**	**Year 2 2008**	**Year 3 2009**	**Year 4 2010**	**Year 5 2011**
Routine Recurrent Cost						
Vaccines (routine vaccines only)	924,291	1,064,920	1,160,620	1,696,488	2,155,412	2,178,919
Traditional vaccines	310170	$342,279	$335,140	$328,065	$329,704	$331,831
New and underused vaccines	614121	$722,641	$825,480	$1,368,423	$1,825,708	$1,847,088
Injection supplies	116,679	$179,382	$205,701	$214,375	$222,494	$228,854
Personnel	699,768	848,575	990,282	1,146,194	1,312,882	1,492,894
Salaries of full-time NIP health workers (immunisation specific)	150,528	187,554	221,842	261,592	305,765	353,814
Per-diems for outreach vaccinators / mobile teams & supervision/monitoring	$549,240	$661,021	$768,439	$884,601	$1,007,116	$1,139,080
Transportation	355,043	514,458	688,625	954,260	579,736	843,482

Maintenance and overheads	89,193	225,267	278,715	346,839	339,070	354,509
Training	$70,000	$76,500	$104,040	$53,060	$108,243	$110,408
Social mobilisation and IEC	$100,000	$153,000	$156,060	$159,181	$162,365	$165,612
Disease surveillance	$79,100	$152,592	$160,846	$164,063	$167,344	$170,691
Program management	$27,000	$102,000	$104,040	$106,121	$108,243	$110,408
Other	$115,560	$396,943	$288,565	$293,063	$283,662	$245,172
Subtotal Recurrent Costs	**2,525,860**	**3,713,638**	**4,137,493**	**4,840,581**	**4,910,784**	**5,101,888**
Routine Capital Costs						
Vehicles	0	341,355	259,639	371,829	218,183	336,555
Cold chain equipment	324,197	514,387	396,570	522,647	409,003	67,846
Other capital equipment	0	144,636	139,726	110,684	52,823	32,350
Subtotal Capital Costs	**$324,197**	**$1,000,378**	**$795,934**	**$1,005,160**	**$680,009**	**$436,751**
Campaigns						
Polio	0	0	0	354,718		0
Measles	0	1,875,187		0	0	791,835
MNT campaigns					442420	
Subtotal Campaign Costs		**$1,875,187**		**$354,718**	**$442,420**	**$791,835**
GRAND TOTAL	**$2,900,831**	**$6,589,203**	**$4,933,427**	**$6,493,523**	**$7,260,314**	**$7,129,536**

Please list in the tables below the funding sources for each type of cost category (if known). Please try and indicate which immunisation program costs are covered from the Government budget, and which costs are covered by development partners (or the GAVI Alliance), and name the partners.

Table 3.6: Summary of current and future financing and sources of funds *(or refer to cMYP)*
Please also refer to Section 5 of c-MYP and the accompanying c-MYP excel costing and financing tool

		Estimated financing per annum in US$ (,000)					
Cost category	**Funding source**	**Base year (2006)**	**Year 1 2007**	**Year 2 2008**	**Year 3 2009**	**Year 4 2010**	**Year 5 2011**
Routine Recurrent Cost							
1. Traditional vaccines	1. Government	0	20000	50000	50000	50000	50000
	2. UNICEF	0	100000	200000	100000	100000	50000
	3. Government of Luxembourg	0	200000	200000	200000	200000	200000
	4. Government of Korea	0	25000	0	0	0	0

	5. JICA	310170	0	0	0	0	0
2. New vaccines	1. Government	0	0	0	$48,500	$100,436	$101,391
	2. GAVI	$614,121	$664,021	$703,350	$1,368,423	$1,725,272	$1,745,697
3. Injection supplies	1. Government	15079	10000	10000	10000	10000	10000
	2. GAVI	31213	39023	46128	47644	50539	52486
	3.UNICEF	81500	40000	60000	80000	100000	125000
4. Salaries of staff	1.government	150,528	187,554	221,842	261,592	305,765	353,814
5. Per diem & transportation for outreach, & supervision	1. government	$ -	$ 40,000	$ 75,000	$ 210,000	$ 250,000	$ 250,000
.	2.UNICEF	$ 174,100	$287,000	$ 287,000	$ 320,000	$ 280,000	$ 280,000
	3. Govt of Luxembourg	$ -	$ 67,781	$ 125,000	$ 100,000	$ 300,000	$ 125,000
	4. GAVI	$ 313,599	$ -	$ -	$ -	$ -	$ -
	5. ADB	$ -	$117,630	$ -	$ -	$ -	$ 10,000
Routine Capital Costs (US$)							
1.Cold Chain	1. UNICEF	-	-	1,234,000	800,000	-	-
	2.Luxembourg	-	514,387	400,000	-	-	-
	3. JICA	324,197					
2. Vehicles	1.UNICEF			61000			
	2.Luxembourg			180000			
	3. ADB		50000				
	4. WHO		22000		44000		
3. Other Capital equipment	1. Luxembourg	-	56,000	70,000	-	-	-
	2. Republic of Korea	-	54,000	-	-	-	-
Campaigns							
1. Measles campaign	1.UNICEF	NA	1,536,498	NA	NA	NA	NA
	2.WHO	NA	209,448	NA	NA	NA	774,074
2.Polio Campaign	1. UNICEF	NA	NA	NA	NA	299, 997	NA
3. MNTE	1. UNICEF	NA	NA	NA	354718	NA	NA
GRAND TOTAL (secured and probable)			**$5,708,950**	**$4,835,752**	**$4,569,191**	**$3,438,452**	**$3,423,212**

4. Immunisation Services Support (ISS): NOT APPLICABLE

Please indicate below the total amount of funds you expect to receive through ISS:

Table 4.1: Estimate of fund expected from ISS

	Base Year	Year 1 20…	Year 2 20…	Year 3 20…	Year 4 20…	Year 5 20…
DTP3 Coverage rate						
Number of infants reported / planned to be vaccinated with DTP3 (as in Table 3.4)						
Number of *additional* infants that annually are reported / planned to be vaccinated with DTP3						
Funds expected ($20 per additional infant)						

* Projected figures
** As per duration of the cMYP

If you have received ISS support from GAVI in the past, please describe below any major lessons learned, and how these will affect the use of ISS funds in future.

Please state what the funds were used for, at what level, and if this was the best use of the flexible funds; mention the management and monitoring arrangements; who had responsibility for authorising payments and approving plans for expenditure; and if you will continue this in future.

Major Lessons Learned from Phase 1	Implications for Phase 2
1.	
2.	
3.	
4.	
5.	
6.	

If you have not received ISS support before, please indicate:

a) when you would like the support to begin:

b) when you would like the first DQA to occur:

c) how you propose to channel the funds from GAVI into the country:

d) how you propose to manage the funds in-country:

e) who will be responsible for authorising and approving expenditures:

- Please complete the banking form (annex 1) if required

5. Injection Safety Support: NOT APPLICABLE

- Please attach the National Policy on Injection Safety including safe medical waste disposal (or reference the appropriate section of the Comprehensive Multi-Year Plan for Immunisation), and confirm the status of the document: DOCUMENT NUMBER……

- Please attach a copy of any action plans for improving injection safety and safe management of sharps waste in the immunisation system (and reference the Comprehensive Multi-Year Plan for Immunisation). DOCUMENT NUMBER…….

Table 5.1: Current cost of injection safety supplies for routine immunisation

Please indicate the current cost of the injection safety supplies for routine immunisation.

	Annual requirements		***Cost per item (US$)***		***Total Cost (US$)***
Year	***Syringes***	***Safety Boxes***	***Syringes***	***Safety Boxes***	
20…					

Table 5.2: Estimated supply for safety of vaccination with …….. vaccine

(Please use one table for each vaccine BCG(1 dose), DTP(3 doses), TT(2 doses) [1], Measles(1 dose) and Yellow Fever(1 dose), and number them from 5.1 to 5.5)

		Formula	**Year 1 20…**	**Year 2 20…**	**Year 3 20…**	**Year 4 20…**	**Year 5 20…**
A	Number of children to be vaccinated [2]	*#*					
B	Percentage of vaccines requested from GAVI [3]	*%*					
C	Number of doses per child	*#*					
D	Number of doses	*A x B/100 x C*					
E	Standard vaccine wastage factor [4]	*Either 2.0 or 1.6*					
F	Number of doses (including wastage)	*A x B/100 x C x E*					
G	Vaccines buffer stock [5]	*F x 0.25*					
H	Number of doses per vial	*#*					
I	Total vaccine doses	*F + G*					
J	Number of AD syringes (+ 10% wastage) requested	*(D + G) x 1.11*					
K	Reconstitution syringes (+ 10% wastage) requested [6]	*I / H x 1.11*					
L	Total of safety boxes (+ 10% of extra need) requested	*(J + K) / 100 x 1.11*					

[1] GAVI supports the procurement of AD syringes to deliver two doses of TT to pregnant women. If the immunisation policy of the country includes all Women in Child Bearing Age (WCBA), GAVI/The Vaccine Fund will contribute to a maximum of two doses for Pregnant Women (estimated as total births)
[2] To insert the number of infants that will complete vaccinations with all scheduled doses of a specific vaccine.
[3] Estimates of 100% of target number of children is adjusted if a phased-out of GAVI/VF support is intended.
[4] A standard wastage factor of 2.0 for BCG and of 1.6 for DTP, Measles, TT, and YF vaccines is used for calculation of INS support
[5] The buffer stock for vaccines and AD syringes is set at 25%. This is added to the first stock of doses required to introduce the vaccination in any given geographic area. Write zero under other years. In case of a phased introduction with the buffer stock spread over several years, the formula should read: [F – number of doses (incl. wastage) received in previous year] * 0.25.
[6] It applies only for lyophilized vaccines; write zero for other vaccines.

- If you do not intend to procure your supplies through UNICEF, please provide evidence that the alternative supplier complies with WHO requirements by attaching supporting documents as available.

6. New and Under-Used Vaccines (NVS)

Please give a summary of the cMYP sections that refer to the introduction of new and under-used vaccines. Outline the key points that informed the decision-making process (data considered etc):

Section 4.11 of c-MYP discusses the plans for new vaccine introduction. The new vaccine introduction will be reviewed and discussed by the technical working group on immunization, which will in turn give advice to ICC and MOH. The technical working group will consider disease burden estimates, the financial and programmatic feasibility in making the decision for new vaccine introduction. For the Hib vaccine introduction, there are no population-based estimates for Hib disease burden. However, the under-5 mortality due to pneumonia remains high. The TWG considered the data from WHO estimates for Hib disease related morbidity and mortality sent to country in August 2007. In addition, the prospect of available financing from GAVI for Hib vaccine was considered with co-financing from government at the rate of $0.20 per dose. The co-financing will remain the same whether the country continues with tetravalent or switches it with pentavalent vaccine. In addition, since the country is currently providing tetravalent vaccine (DPT-HepB), introducing pentavalent vaccine with the same schedule as tetravalent vaccine will not put any additional demands or burden on the system, and hence will be programmatically feasible. Use of single dose vials will greatly reduce the vaccine wastage, which is almost 40% for the current tetravalent vaccine. In addition, introducing a vaccine that targets pneumonia and meningitis, perceived by communities as real health problems, may help to increase the community demand for immunization and may lead to further improvement in routine immunization coverage rates. The plan also discusses about strengthening and continuation of sentinel surveillance for meningoencephalitis ongoing in Mahosot hospital in Vientiane and two provincial hospitals to provide evidence on disease burden before vaccine introduction and evaluation of vaccine impact after vaccine introduction.

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Please summarise the cold chain capacity and readiness to accommodate new vaccines, stating how the cold chain expansion (if required) will be financed, and when it will be in place. Please use attached excel annex 2a (Tab 6) on the Cold Chain. Please indicate the additional cost, if capacity is not available and the source of funding to close the gap

The current cold chain capacity is more than adequate to absorb introduction of single-dose pentavalent vaccine at national and sub-national levels, as well as intensify Hepatitis B birth dose efforts.

In 2006, the total available net positive storage capacity was 9360 litres, while the capacity required for 100% coverage of the entire birth cohort at the current vaccination schedule was estimated at 5824 liters. This includes the Hepatitis B birth dose, which is currently procured for 10% of the birth cohort. **With the introduction of a single dose pentavalent vaccine, assuming the receipt of two vaccine shipments per year (as is current practice) and three months buffer stock, the total vaccine volume increase to 9200 litres, which is still below the 2006 net capacity.**

Furthermore, a new cold room with a gross volume of 39.3 m^3 and freezer room with a gross volume of 19.9 m^3 was installed in 2007**, increasing the current net positive capacity at national level to 18,720 litres. (grossing factors of 4.2 and 3.9 for positive and negative, respectively).** This far exceeds the total vaccine volume requirements to accommodate all the traditional vaccines including hepatitis B monovalent vaccine for birth dose and single dose pentavalent vaccine, even with one shipment each year.

It should be noted that the higher cold chain storage requirement for single dose pentavalent will be partially offset by the marked reduction in vaccine wastage, currently estimated to be quite high with DTP-Hep B. With respect to the Hep B birth dose, it is currently procured for only 10% of the birth cohort, in two dose vials. The target is to achieve 50% of birth cohort by 2010. As mentioned previously, even assuming all children receive 100% birth dose, the net positive capacity is sufficient.

With financial support from UNICEF and the Governments of Japan and Luxembourg, the cold chain at provincial, district and health centre levels will be reinforced and expanded over a period of three years (refrigerators, cold boxes and vaccine carriers, including spare parts of cold chain), based on the results of a national cold chain assessment conducted in 2007.. The Government of Japan ($ 2,500,000) and Government of Luxembourg ($ 1,314,000) will fund the cold chain expansion and have already committed funds for this purpose. The funding includes provisions not only the equipment but also for training on comprehensive cold chain maintenance and vaccine management. The Government of Lao PDR will provide the operational funding for fuel. Because there are several districts without electricity or reliable access to other fuels, a significant amount of solar refrigerators are being installed in these remote areas.

Also please refer to section 2 and 4.6 in the c-MYP enclosed with this application.

Table 6.1: Capacity and cost (for positive storage) (*Refer to Tab 6 of Annex 2a or Annex 2b)*

		Formula	Year 1 2007	Year 2 2008	Year 3 2009	Year 4 2010	Year 5 2011
A	Annual ***positive*** volume requirement, including new vaccine **in litres**	*Sum-product of total vaccine doses multiplied by unit packed volume of the vaccine*	5824	5824	9200	9200	9200
B	Annual ***positive*** capacity, including new vaccine in liters	#	18720	18720	18720	18720	18720
C	Estimated minimum number of shipments per year required for the actual cold chain capacity	*A / B*	1	1	1	1	1
D	Number of consignments / shipments per year	*Based on national vaccine shipment plan*	2	2	2	2	2
E	Gap (if any)	*((A / D) - B)*					
F	Estimated cost for expansion	*US $*					

Please briefly describe how your country plans to move towards attaining financial sustainability for the new vaccines you intend to introduce, how the country will meet the co-financing payments, and any other issues regarding financial sustainability you have considered (refer to the cMYP):

Lao PDR has been dependent on donors for all its vaccine supplies since the start of EPI in the country. JICA supplied all the traditional vaccines till 2006, until it withdrew its support from 2007 after supporting EPI for almost 16 years. The Government of Laos PDR (GoL) committed funds for the first time for the purchase of vaccines in 2007, covering about 20% of vaccine costs. The GoL also successfully mobilized other donors such as UNICEF and the Governments of Luxembourg and Government of Korea to finance a significant portion of the traditional vaccine costs from 2008 to 2010. In addition, GoL commits itself to start co-financing of pentavalent vaccine from 2008 at the rate of $0.20 per dose. GoL hopes that GAVI will continue to finance the rest of the cost of pentavalent vaccine until the market price comes down substantially to become affordable by the government. Besides financing the costs of vaccine from the national budget, the GoL is struggling to fund the cost of outreach (per diem and transportation costs) which is needed to reach it remote thinly spread out population. These activities were previously supported by GAVI ISS funds.

Immunization is considered a priority programs by the GoL. The Health Strategy towards 2020 and in its health sector plan, EPI is one of the eight components of the primary health care package, and the Government is committed to maintain and increase the coverage of immunization services. To improve the program GoL plans to introduce new vaccines and improve the service delivery both at health facilities and by outreach to remote inaccessible population. A key financial sustainability strategy is to continue its efforts to increase domestic budget towards meeting the vaccine and operational cost of immunization services. **Government of Lao will continue to provide at least 15% of routine vaccine costs and the co-financing required for pentavalent vaccine.** Laos is working very actively to work with all the existing donor partners and new partners to mobilize additional funding for both vaccines and operational costs especially for outreach services. This requires consulting with the ICC to raise the awareness of program shortfalls and the possibilities to decrease the funding gaps.

Table 6.2: Assessment of burden of relevant diseases *(if available)*:

Disease	Title of the assessment	Date	Results
Hib	WHO estimates for Hib and pneumococcal disease, sent to country in August 2007	2000	Total annual **cases** of severe illness due to Hib among children 1-59 months of age in year 2000=11790 (9276-16684) Meningitis cases=230(140-321) Severe pneumonia cases: 11521 (9113-16309) Non-meningitis, non-pneumonia cases: 39 (23-54) Total number of annual deaths attributed to Hib: 689 (443-1050)_ Meningitis deaths=146(84-213) Pneumonia deaths=522(347-807) Non-meningitis,non-pneumonia deaths=21(12-30) The estimates are as on 2000. These deaths amount to 4.1% of all under-5 deaths in 2000.

If new or under-used vaccines have already been introduced in your country, please give details of the lessons learnt from storage capacity, protection from accidental freezing, staff training, cold chain, logistics, drop out rate, wastage rate etc., and suggest solutions to address them:

Lessons Learned	Solutions / Action Points
Need for strong IEC efforts to make communities realize what is new in the immunization program if the new vaccine is to impact the overall community demand for immunization.	Special IEC efforts with printing of carefully designed materials will be launched before the actual introduction of vaccine to make communities aware of how the new vaccine offers much more protection than the earlier vaccines against the disease they see every day (e.g. pneumonia and meningitis).
Considering the high cost of new vaccines, special planning and efforts need to made to reduce the vaccine wastage, including	The new pentavalent vaccine will be in single dose vials, and will greatly help to reduce the vaccine wastage. In addition, during training,

generating awareness among health workers about the cost of new vaccines.	special efforts will be made to sensitize the health workers of the high cost of vaccine and need to reduce the vaccine wastage while maintaining coverage achievements.
Phased introduction may delay the overall introduction of vaccine and may complicate the overall logistic management and management of IEC efforts especially at national level.	Vaccine will be introduced nationwide rather than nation-wide, and advance planning will be made to use all the tetravalent vaccine before introduction of new vaccine.
More attention is necessary to the possible freezing of DTP-HB-HIB vaccine due to poor cold chain storage and transport practice.	The health workers throughout the country will receive new training on cold chain and vaccine management practices. EVSM assessment, funded by UNICEF/GOJ will be executed in 2008.
Supervision has not been fully implemented due to funding shortfalls	New integrated MCH/EPI supervision is proposed with a central level supervisor now assigned to each of the 17 provinces.

Please list the vaccines to be introduced with support from the GAVI Alliance (and presentation):

1. DTP-HepB-HIB one dose vial (liquid)

First Preference Vaccine

As reported in the cMYP, the country plans to introduce *Haemphilous influzenza* vaccinations, using **DTP-HepB-HIB** vaccine, in *one dose vial presentation(liquid)* form.

Please refer to the excel spreadsheet Annex 2a or Annex 2b (for Rotavirus and Pneumo vaccines) and proceed as follows:

- Please complete the "Country Specifications" Table in Tab 1 of Annex 2a or Annex 2b, using the data available in the other Tabs: Tab 3 for the commodities price list, Tab 5 for the vaccine wastage factor and Tab 4 for the minimum co-financing levels per dose[2].
- Please summarise the list of specifications of the vaccines and the related vaccination programme in Table 6.3 below, using the population data (from Table 3.4 of this application) and the price list and co-financing levels (in Tables B, C, and D of Annex 2a or Annex 2b).

[2] *Table D1 should be used for the first vaccine, with tables D2 and D3 for the second and third vaccine co-financed by the country*

- Then please copy the data from Annex 2a or 2b (Tab "Support Requested") into Tables 6.4 and 6.5 (below) to summarize the support requested, and co-financed by GAVI and by the country.

- Please submit the electronic version of the excel spreadsheets Annex 2a or 2b together with the application

Table 6.3: Specifications of vaccinations with new vaccine

Vaccine: DPT-HepB-Hib	*Use data in:*		**Year 1 2007**	**Year 2 2008**	**Year 3 2009**	**Year 4 2010**	**Year 5 2011**
Number of children to be vaccinated with the third dose	*Table 3.4*	#	NA	NA	72,361	149,378	156,199
Target immunisation coverage with the third dose	*Table 3.4*	#	NA	NA	41%	85%	90%
Number of children to be vaccinated with the first dose	*Table 3.4*	#	NA	NA	76,773	158,165	159,670
Estimated vaccine wastage factor	*Annex 2a or 2b Table E - tab 5*	#	NA	NA	1.05	1.05	1.05
Country co-financing per dose *	*Annex 2a or 2b Table D - tab 4*	$	NA	NA	0.20	0.20	0.20

* Total price pre dose includes vaccine cost, plus freight, supplies, insurance, fees, etc

Table 6.4: Portion of supply to be co-financed by the country (and cost estimate, US$)

		Year 1 2007	**Year 2 2008**	**Year 3 2009**	**Year 4 2010**	**Year 5 2011**
Number of vaccine doses	#	NA	NA	13,000	30,200	32,300
Number of AD syringes	#	NA	NA	13,800	32,000	34,200
Number of re-constitution syringes	#	NA	NA	0	0	0
Number of safety boxes	#	NA	NA	175	375	400
Total value to be co-financed by country	**$**	NA	NA	$48,500	$100,500	$101,000

Table 6.5: Portion of supply to be procured by the GAVI Alliance (and cost estimate, US$)

		Year 1 2007	**Year 2 2008**	**Year 3 2009**	**Year 4 2010**	**Year 5 2011**
Number of vaccine doses	#	NA	NA	228,900	471,700	471,900
Number of AD syringes	#	NA	NA	242,000	498,800	498,900
Number of re-constitution syringes	#	NA	NA	0	0	0

Number of safety boxes	#	NA	NA	2700	5,550	5,550
Total value to be co-financed by GAVI	**$**	NA	NA	$853,500	$1,568,500	$1,473,500

- Please refer to http://www.unicef.org/supply/index_gavi.html for the most recent GAVI Alliance Vaccine Product Selection Menu, and review the GAVI Alliance NVS Support Country Guidelines to identify the appropriate country category, and the minimum country co-financing level for each category.

Second Preference Vaccine

If the first preference of vaccine is in limited supply or currently not available, please indicate below the alternative vaccine presentation

DTP-HepB-HIB 2-dose vial (lyophilized)

- Please complete tables 6.3 – 6.4 for the new vaccine presentation

- Please complete the excel spreadsheets Annex 2a or Annex 2b for the new vaccine presentation and submit them alongside the application.

Procurement and Management of New and Under-Used Vaccines

a) Please show how the support will operate and be managed including procurement of vaccines (GAVI expects that most countries will procure vaccine and injection supplies through UNICEF):

Lao PDR will prefer procuring the pentavalent vaccine through UNICEF supply system, as is the current modality. Two shipments each year will be ordered. Lao PDR will release its share of co-financing payments at the time of placing the order for the 2nd shipment of the vaccine supply with UNICEF.

In addition, the cash grant for introduction of new vaccine ($100000) will be received in MOH bank account as specified in annex 1 on the banking form. NIP and the technical working group and ICC will provide oversight over implementation of new vaccine introduction activities and monitoring and supervision.

b) If an alternative mechanism for procurement and delivery of supply (financed by the country or the GAVI Alliance) is requested, please document:

- *Other vaccines or immunisation commodities procured by the country and description of the mechanisms used.*
- *The functions of the National Regulatory Authority (as evaluated by WHO) to show they comply with WHO requirements for procurement of vaccines and supply of assured quality.*

NOT APPLCIABLE, as UNICEF procures all its vaccines and injection supplies through UNICEF procurement mechanism, and intends to continue the same with pentavalent vaccine.

c) Please describe the introduction of the vaccines (refer to cMYP)

Please refer to section 4.11 and document # 9 for the details of vaccine introduction plan.

d) Please indicate how *funds* should be transferred by the GAVI Alliance (if applicable)

Lao PDR would like to use UNICEF procurement system to purchase the pentavalent vaccine along with AD syringes. Hence the funds for vaccine and AD syringes purchase may directly be transferred to UNICEF.

Lao PDR would request GAVI to transfer the new vaccine introduction grant of $100,000 to the bank account of MOH as indicated in the banking form on Annex 1.

e) Please indicate how the co-financing amounts will be paid (and who is responsible for this)

Ministry of Health of Lao PDR will be responsible for payment of co-financing amounts. Lao PDR would like to receive the vaccine in two shipments. Following the regulations of the internal budgeting and financing cycles, the Government Lao PDR would make the co-financing payments at the time of placing the vaccine supply orders with UNICEF. Since Lao DPR will now have to reschedule the plan for introduction to July 2009, and subject to approval of the application in September 2008 round, **Lao PDR will place its first shipment order at around Jan/Feb 2009 and 2nd order at around October 2009, and will make its cofinancing payments at the time of 2nd order.**

f) Please outline how coverage of the new vaccine will be monitored and reported (refer to cMYP)

NIP regularly monitors the coverage of all routine vaccines by district and province. All the health centers are required to send the coverage data in pre-defined reporting forms to districts, which in turn aggregate data for all health centers and send upward to provinces. Provinces compile data for all the districts and send to NIP.

With introduction of new vaccines, the reporting forms, immunization registers at the health facility and child immunization cards will be revised to reflect introduction of pentavalent vaccine. NIP, TWG (comprised of NIP, WHO, UNICEF, JICA and Govt. of Luxembourg) and ICC will regularly monitor the reported coverage data through regular reviews and analysis. In addition, supportive supervision reports from routine immunization monitoring system will be used for on-site monitoring. In addition to this, data quality self-assessment surveys will be organized for selected areas to validate the administratively reported data and the consistency in reporting across different levels of health facilities. Small scale EPI coverage surveys will be planned in selected districts during the five year plan period. Finally, UNICEF conducts nationwide Multiple Indicator Cluster Survey (MICS) every five years. The last two MICS surveys were conducted in 2000 and 2006. It is expected that the next survey will be conducted by UNICEF in 2010/2011. These are household surveys and will validate the administrative reported national coverage levels.

In addition, to reporting and monitoring of vaccine coverage data, the sentinel surveillance for meningoencephalitis at the three hospitals will be continued during this plan period. The surveillance will help to assess the impact of vaccine. Finally, the data on admissions for pneumonia and meningitis in hospitals for children under five years of age as reported through national health information systems will be regularly monitored.

New and Under-Used Vaccine Introduction Grant

Table 6.5: calculation of lump-sum

Year of New Vaccine introduction	N° of births (from table 3.4)	Share per birth in US$	Total in US$
2009	187595	$ 0.30	$100000

Please indicate in the tables below how the one-time Introduction Grant[3] will be used to support the costs of vaccine introduction and critical pre-introduction activities (refer to the cMYP).

Table 6.6: Cost (and finance) to introduce the first preference vaccine (US$)

Cost Category	Full needs for new vaccine introduction	Funded with new vaccine introduction grant
	US$	**US$**
Training	**20,000**	**20,000**
Social Mobilization, IEC and Advocacy	**70,000**	**70,000**
Cold Chain Equipment & Maintenance		
Vehicles and Transportation		
Programme Management		
Surveillance and Monitoring	**10,000**	**10,000**
Human Resources		
Waste Management		
Technical assistance		
Other (please specify)		
Other (please specify)		
Other (please specify)		
Other (please specify)		
Total		

[3] The Grant will be based on a maximum award of $0.30 per infant in the birth cohort with a minimum starting grant award of $100,000

- Please complete the banking form (annex 1) if required

Please complete a table similar to the one above for the second choice vaccine (if relevant) and title it **Table 6.7: Cost (and finance) to introduce the second preference vaccine (US$)**

7. Additional comments and recommendations from the National Coordinating Body (ICC/HSCC)

8. Documents required for each type of support

Type of Support	Document	DOCUMENT NUMBER	Duration *
ALL	WHO / UNICEF Joint Reporting Form (last two)	1 and 2	2006, 2007
ALL	Comprehensive Multi-Year Plan (cMYP)	3	2007-2011
ALL	Endorsed minutes of the National Coordinating Body meeting where the GAVI proposal was endorsed	-NA-	
ALL	Endorsed minutes of the ICC meeting where the GAVI proposal was discussed	4	
ALL	Minutes of the three most recent ICC meetings	5, 6 & 7	
ALL	ICC/HSCC workplan for the forthcoming 12 months	8	
Injection Safety	National Policy on Injection Safety including safe medical waste disposal (if separate from cMYP)	-NA-	
Injection Safety	Action plans for improving injection safety and safe management of sharps waste (if separate from cMYP)	-NA-	
Injection Safety	Evidence that alternative supplier complies with WHO requirements (if not procuring supplies from UNICEF)	-NA-	
New and Under-used Vaccines	Plan for introduction of the new vaccine (if not already included in the cMYP)	9	

** Please indicate the duration of the plan / assessment / document where appropriate*

ANNEX 1

Banking Form

SECTION 1 *(To be completed by payee)*

In accordance with the decision on financial support made by the GAVI Alliance dated . . . . . , the Government of Lao PDR hereby requests that a payment be made, via electronic bank transfer, as detailed below:

Name of Institution: *(Account Holder)*	MCH-CENTER (EPI), Ministry of Health-Lao PDR		
Address:			
City – Country:	Vientiane, Lao PDR		
Telephone No.:	**Fax No.:**		
Amount in USD:	(To be filled in by GAVI Secretariat)	**Currency of the bank account:**	USD
For credit to: ***Bank account's title***	*MCH CENTER (EPI),Minstry of Health-Lao PDR*		
Bank account No.:	0108110100033		
At: ***Bank's name***	Banque Pour Le Commerce Exterieur Lao-BCEL		

Is the bank account exclusively to be used by this program? **YES (X) NO ( )**

By whom is the account audited? .....

Signature of Government's authorizing official:
By signing below, the authorizing official confirms that the bank account mentioned above is known to the of Finance and is under the oversight of the Auditor General.

Name:	**Dr. Ponmeck Dalaloi**	**Seal:**
Title:	**Minister of Health**	
Signature:		
Date:		
Address and Phone number		
Fax number		
Email address:		

SECTION 2 ***(To be completed by the Bank)***

FINANCIAL INSTITUTION		CORRESPONDENT BANK (*In the United States)*
Bank Name:		
Branch Name:		
Address:		
City – Country:		
Swift code:		
Sort code:		
ABA No.:		
Telephone No.:		
Fax No.:		
Bank Contact Name and Phone Number:		

I certify that the account No. . . . . is held by *(Institution name)* . . . . . .at this banking institution.

The account is to be signed jointly by at least …… *(number of signatories)* of the following authorized signatories:	**Name of bank's authorizing official:**
1 Name: ..... **Title:**	**Signature:** ..... **Date:** .....
2 Name: ..... **Title:**	**Seal:**
3 Name: ..... **Title:**	
4 Name: ..... **Title:**	

COVERING LETTER

(To be completed by UNICEF representative on letter-headed paper)

TO: GAVI Alliance – Secretariat
Att. Dr Julian Lob-Levyt
Executive Secretary
C/o UNICEF
Palais des Nations
CH 1211 Geneva 10
Switzerland

On the …… I received the original of the BANKING DETAILS form, which is attached.

I certify that the form does bear the signatures of the following officials:

	Name	Title
Government's authorizing official	.....	.....
Bank's authorizing official	.....	.....

Signature of UNICEF Representative:

Name .....

Signature .....

Date .....