



Global Alliance for Vaccines and Immunization (GAVI)

APPLICATION FORM FOR COUNTRY PROPOSALS: PHASE 2

For Support to:

*Introduce pneumococcal vaccine into the EIP in **2010***

CAMEROON

May 2008

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.

CONTENTS

SECTION	SUPPORT	PAGE
1. <i>Executive Summary</i>	ALL	2-3
2. <i>Signatures of the Government and National Coordinating Bodies</i>	ALL	4-5
3. <i>Immunization program data</i>	ALL	8-14
4. <i>Immunization Services Support (ISS)</i>	ISS	15
5. <i>Injection Safety Support (INS)</i>	INS	16
6. <i>New and Under-Used Vaccine Support (NVS)</i>	NVS	18-27
7. <i>Additional comments and recommendations from the National Coordinating Body (CCI)</i>	ALL	28
8. <i>Documents required for each type of support</i>	ALL	29
<i>Annex 1 – Banking Form</i>	ISS + NVS	33
<i>Annex 2 – Excel Spreadsheet</i>	NVS	

Executive Summary

Under GAVI Phase II, the Government of Cameroon is pleased to submit an application to introduce the *Streptococcus pneumoniae* (pneumococcus) vaccine into the Expanded Program on Immunization beginning in January 2010.

Cameroon has received GAVI immunization services support since 2001, injection safety support from 2003 to 2005, and support for introducing new vaccines into the EIP—namely, yellow fever vaccine in June 2004, tetravalent viral hepatitis B (DTP-HepB) vaccine in 2005, and pentavalent *Haemophilus influenzae* type b (DTP-HepB+Hib) vaccine beginning in January 2009.

This support from GAVI has helped to improve our performance in qualitative as well as quantitative terms. National immunization coverage rose from 43% in 2001 to 82.49% in 2007 (reference antigen DTP-HepB3). The number of health districts with over 80% immunization coverage continues to grow (56% in 2007). The wastage rate for DTP-HepB was 12% for 98 out of 167 health districts in 2006, and 10% for 86 of 171 in 2007.

Cameroon aims to achieve 90% national immunization coverage as early as 2010, with at least 80% per antigen in each district and a vaccine wastage rate of 5% for DTP-HepB.

In its effort to help reduce infant mortality and morbidity to achieve MDG4, Cameroon proposes, in its revised 2007-2011 complete Multi-year Plan (cMYP) for EIP, to pursue the introduction of new vaccines into the EIP, namely, rotavirus vaccine in 2011, as well as the pneumococcal vaccine that is the subject of this application.

This application was prepared by the EIP in conjunction with the program's technical partners (WHO, UNICEF) in the course of several workshops.

The epidemiological context of *Streptococcus pneumoniae* in the subregion and in Cameroon presents cause for introduction of this vaccine.

Administration of the *Streptococcus pneumoniae* vaccine is to begin on January 1, 2010 and will follow the normal immunization schedule for the pentavalent (DTP-HepB+Hib), i.e., at 6, 10 and 14 weeks for the three doses required for children under one year of age.

The 2007-2011 complete Multi-year Plan submitted to the GAVI Secretariat and the partners includes a section on strategies for the program's financial sustainability. The most important strategy will be to strengthen advocacy with the Government for sustained immunization independence.

Taking into account prior experiences and lessons learned about introducing new vaccines in our country, the main implementation strategies recommended for successful introduction of the pneumococcal vaccine are:

- Establishment of a sustained financing mechanism for immunization;
- Strengthening of communication/social mobilization;
- Improvements in quality of services and strengthening of the advanced strategy for immunization;
- Strengthening of staff capabilities;
- Steady supply of vaccines and inputs;
- Reliable management of vaccine stock and monitoring of usage;
- Strict enforcement of injection safety and waste management;

- Stepped-up surveillance of pneumococcus in the EIP;
- Strengthening of monitoring and supervision; and
- Applied research.

The total cost of the plan amounts to US\$3,813,811, not including vaccine and other inputs. The table below summarizes the quantities of vaccine required, the estimated cost, and the amounts of GAVI and government financing for 2010-2011.

Year	2010	2011	Total
Quantity of vaccine required	2,933,300	2,497,400	5,430,700
Safety boxes	32,575	27,725	60,300
Funds required (USD)	8,922,000	7,596,000	16,518,000
Financing to be provided by the country	587,000	574,000	1,161,500
Co-financing to be provided by GAVI (minimum)	8,335,000	7,021,500	15,356,500

2. Signatures of the Government and National Coordinating Bodies

Government and the Inter-Agency Coordinating Committee for Immunization

The Government of **the Republic of Cameroon** would like to expand the existing partnership with the GAVI Alliance for the improvement of the infants routine immunization program of the country, and specifically hereby requests GAVI support to **introduce the pneumococcal vaccine into the EIP**.

The Government of **the Republic of Cameroon** commits itself to developing national immunization 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 immunization of children as outlined in this application.

Table No. 6.5 on page 22 of this application shows the amount of support in either supply or cash that is required from the GAVI Alliance. Table No. 6.4 on page 22 of this application shows the Government financial commitment for the procurement of the new vaccine (NVS support only).

Under the budget cycle and internal financing rules, the Government will pay its annual portion of the financing in **July 2009**. Payment for procurements made during the first year of co-financed support will be made around **September 2009**.

Minister of Health:

Signature :

Name: **André MAMA FOU DA**

Date :

Minister of Finance:

Signature :

Name: **Lazare ESSIMI MENYE**

Date :

National Coordinating Body – Inter-Agency Coordinating Committee for Immunization:

We the members of the ICC/HSCC¹ met on **April 24, 2004** to review the proposal. At that meeting we endorsed the proposal on the basis of the supporting documentation which is attached.

➤ The endorsed minutes of this meeting are attached as DOCUMENT NUMBER: **1**

Name/Title	Agency/Organization	Signature
• Mr. André MAMA FOU DA	Ministry of Public Health	
• Prof. Fru Angwafor III (Secretary General of Health)	Ministry of Public Health	
• Dr. Martina BAYE (Vice-Chair of the ICC)	Ministry of Public Health	
• Mr. MAÏNA DJOULDE, Head of Cooperation Division	Ministry of Public Health	
• Dr. Nomo Emmanuel (Secretary of the ICC)	Ministry of Public Health	
• Dr. Charlotte Faty Ndiaye Representative	WHO	
• Dr. DJUMO Clément Child Survival Specialist	UNICEF	
• Dr. Mbessi Jean Robert	Catholic Health Organization of Cameroon	
• Dr. Dominique Rousset	Pasteur Center of Cameroon	
•		

¹ Inter-agency coordinating committee or health sector coordinating committee, whichever is applicable.

•		
•		
•		
•		
•		

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

Name: **Dr. NOMO Emmanuel** Title: **Permanent Secretary
Central Technical Group-EIP**

Tel No.: **(237) 22 23 09 42** Address: **B.P. 2084 Yaoundé – Messa**

Fax: **(237) 22 23 09 47**

Email: **gtc_peg@yahoo.fr**

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 Immunization

Agencies and partners (including development partners and CSOs) supporting immunization services are coordinated and organized through an inter-agency coordinating mechanism (ICC/HSCC). The ICC/HSCC are 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/HSCC:
Inter-Agency Coordinating Committee (ICC)

Date of formation of the current ICC/HSCC:
July 29, 2002

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

Frequency of meetings: **Two (2) statutory meetings per year plus extraordinary meetings**

Composition:

Function	Title / Organization	Name
Chair	Minister of Public Health	Mr. André MAMA FOU DA
Vice-Chair	Director of Family Health	Dr. BAYE Martina LUKONG
Secretary	Permanent Secretary, Central Technical Group-EIP	Dr. Emmanuel Nomo
Members	Representative of the Ministry of Employment, Work and Social Security	The participant appointed depends on the agenda
	Representative of the Ministry of Communication	The participant appointed depends on the agenda
	Representative of the Ministry of Social Affairs	The participant appointed depends on the agenda
	Representative of the Ministry of Scientific and Technical Research	The participant appointed depends on the agenda
	Representative of the Ministry of Higher Education	The participant appointed depends on the agenda
	Representative of the Ministry of Territorial Administration	The participant appointed depends on the agenda
	Representative of the Ministry of Finance	The participant appointed depends on the agenda
	Representative of the Ministry of Defense	The participant appointed depends on the agenda
	Representative of the Ministry of Women's Affairs	The participant appointed depends on the agenda
	Representative of WHO	Dr. Charlotte Faty Ndiaye
	Representative of UNICEF	Mrs. Silvia LUCIANI
	Representative of the AFD	Mr. Coullange Pascal
	Representative of Rotary	Mr. Jean Richard BIELEU
	Representative of GTZ	Dr. Gerd EPPEL
	Representative of HKI	Dr. Xavier CRESPIEN
	Plan Cameroon	Mr. Bocoum
	Representative of CEPCA	Mr. John ESSOBE
	Representative of Catholic Health Service	Dr. Jean Robert MBESSI
	Cameroon Red Cross	Mr. William ETEKI MBOUMOUA
	Coopération Française	
	Agence Française de Développement	
	JICA	Ambassador of Japan

Major functions and responsibilities of the ICC/HSCC:

The mission of the ICC is to establish the broad outlines and general objectives of the Expanded Program on Immunization.

More specifically, the ICC's responsibilities are to:

- Formulate and implement national policy for the Expanded Program on Immunization;
- Coordinate, harmonize and ensure consistency in all interventions of the different partners;
- Approve the annual action plans of the Expanded Program on Immunization and the related budgets;
- Mobilize the resources needed for the activities of the Expanded Program on Immunization;
- Coordinate and monitor the activities of the various components of the Expanded Program on Immunization;
- Monitor the execution of the action plans;
- Evaluate the implementation of the Expanded Program on Immunization.

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

1. Strengthen advocacy and resource mobilization;
2. Expand the ICC to other programs and partners of the Ministry of Health;
3. Strengthen coordination at the province and district levels as part of the effort to strengthen the health care system.

3. Immunization Program 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 Immunization (or equivalent plan), and attach a complete copy (with an executive summary) as DOCUMENT NUMBER 2 (updated 2007-2011 cMYP)
- Please refer to the two most recent annual WHO/UNICEF Joint Reporting Forms on Vaccine Preventable Diseases and attach them as DOCUMENT NUMBERS 3 (2005 JRF, 2006 JRF and 2007 JRF)
- Please refer to Health Sector Strategy documents, budgetary documents, and other reports, surveys, etc., as appropriate. DOCUMENT No. 4: Health Sector Strategy 2001-2010

Table 3.1: Basic facts for the year 2007 (the most recent; specify dates of data provided)

	Figure	Date	Source
Total population	18,579,417	1987	1987 General Population and Housing Census (RGPH) with annual increase of 2.9%
Infant mortality rate (per 1000)	74/1000	2004	2004 Cameroon Demographic and Health Survey [Enquête démographique et de santé du Cameroun] (EDSC) III
Surviving infants*	743,180	1987	1987 General Population and Housing Census
GNI per capita (US\$)	512		
Percentage of GDP allocated to health	3%		
Percentage of Government expenditure on health (budget allocation)	4.53	2006	

* 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:
Health Sector Strategy 2001-2010

Is the cMYP (or updated Multi-year Plan) aligned with the document (timing, content, etc.)?
Yes, but the Health Sector Strategy is still being revised.

Please indicate the national planning budgeting cycle for health:
Bottom-up planning: start with district Health Development Plans (4 years: 2008-2011), then consolidated plan for the province and national plan.

Please indicate the national planning cycle for immunization:
Strategic plan every 5 years and an action plan every year (current 2007-2011 cMYP)

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 immunization services)	Indicate by an "x" if given in:		Comments
		Entire country	Only part of the country	
BCG/Polio 0	At birth	X		
DTP-HepB1-Hib1/ Polio 1 Pneumo 1	6 weeks	X		
DTP-HepB2-Hib2/ polio 2 Pneumo 2	10 weeks	X		
DTP-HepB3-Hib3/ Polio 3 Pneumo 3	14 weeks	X		Hib, to be introduced into the EIP in 2009, will have the same schedule as DTP-Hep B, as will pneumo.7 in 2010
Measles	9 months	X		
Yellow fever	9 months	X		
Vitamin A	6-11 months	X		
	12-59 months	X		
	Mothers (< 8 weeks from delivery)	X		

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

Trends of immunization coverage (in percentage)						Vaccine preventable disease burden		
Vaccine		Reported (JRF)		Survey (FIC 2005)		Disease	Number of reported cases	
		2005	2006	2005 Health booklet only	2005 Health booklet + History		2005	2006
BCG		77%	84.96%	50.8%	89.5%	Tuberculosis	22,073	13,802
DTP	DTP1-Hep B1	85.3%	86.69%	50.1%	84.4%	Diphtheria	not available	not available
	DTP-Hep B3	79.7%	80.63%	44.6%	74.5%	Pertussis	not available	not available
Polio 3		79.7%	78.15%	47.6%	72.8%	Polio	01	02
Measles (first dose)		68.6%	72.52%	40.4%	70.7%	Measles	1,328	709
TT2+ (pregnant women)		60.5%	62.16%	25.3%	64.6%	NN tetanus	129	175
Hib3						Hib **	12	5
Yellow fever		68.7%	72.19%	38.5%	67.5%	Yellow fever	831	859
HepB3		79.7%	80.63%	44.6%	74.5%	hepB sero-prevalenceB*	not available	not available
Vit. A supplement	Mothers (<6 weeks from delivery)	42.63%	36.33%	37.8%** *				
	Infants (>6 months) : 6-11 months	109%	125%	83.7% ****				

* if available ** If only the total is available for tetanus, please indicate *** Note: JRF asks for Hib meningitis

**** The data for vitamin A in the 2005 National Immunization Coverage Survey do not specify the difference between "health booklet only" and "health booklet + history."

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:

2005 National Immunization Coverage Survey for children 12-23 months in Cameroon, Final Report (Institut National de la Statistique)

Table 3.4: Baseline and annual targets (page 57 of the cMYP)

Number	Baseline and targets					
	Base year 2006	Year 1 2007	Year 2 2008	Year 3 2009	Year 4 2010	Year 5 2011
Births (4.5% of the population)	812,511	836,074	860,320	885,269	910,942	937,359
Infants' deaths (0.5% of the population)	90,279	92,897	95,591	98,363	101,216	104,151
Surviving infants (4% of the population)	722,232	743,177	764,729	786,906	809,726	833,208
Pregnant women (5% of the population)	902,790	928,971	955,911	983,632	1,012,158	1,041,510
Target population vaccinated with BCG	613,631	685,580	731,272	770,184	810,738	843,623
BCG coverage*	84.96%	82%	85%	87%	89%	90%
Target population vaccinated with OPV3	564,429	609,405	657,667	692,478	728,754	758,220
OPV3 coverage**	78.15%	82%	86%	88%	90%	91%
Target population vaccinated with DTP-HepB3***	582,319	609,405	657,667	NA	NA	NA
DTP-HepB3 coverage**	80.63%	82%	86%	NA	NA	NA
Target population vaccinated with DTP-HepB3-Hib3***	582,319	NA	NA	692,478	728,754	758,220
DTP-HepB3-Hib3 coverage***	80.63%	NA	NA	88%	90%	91%
Target population vaccinated with DTP1 HepB1***	626,081	646,564	672,962	708,215	744,948	783,216
Wastage rate ² in base-year and planned thereafter	20%*	15%	NA*****	NA*****	NA*****	NA*****
Target population vaccinated with 3 rd dose of pneumo.7		NA	NA	NA	728,754	758,220
..... Coverage pneumo.7**	NA	NA	NA	NA	90%	91%
Target population vaccinated with 1st dose of pneumo	NA	NA	NA	NA	744,948	783,216
Wastage rate ¹ in base-year and planned thereafter	NA	NA	NA	5%	5%	5%
Target population vaccinated with 1st dose of measles	523,758	579,678	627,078	668,870	712,559	749,887
Target population vaccinated with 2nd dose of measles	NA	NA	NA	NA	NA	NA
Measles coverage**	72.52%	78%	82%	85%	88%	90%
Pregnant women vaccinated with TT+	561,154	631,700	716,934	786,906	829,970	874,969

²The formula to calculate a vaccine wastage rate (in percentage): $[(A - B) / A] \times 100$. Whereby A = the number of doses distributed for use according to the supply records with correction for stock balance at the end of the supply period; B = the number of vaccinations with the same vaccine in the same period. For new vaccines, check **table α** after Table 7.1.

* Data from 76/159 health districts

TT+ coverage****		62.16%	68%	75%	80%	82%	84%
Vit. A supplement	Mothers (<6 weeks from delivery) Post-Partum Women	14.16%	60%	65%	70%	75%	80%
	Infants (>6 months) 6-11 months	125%	100%	100%	100%	100%	100%
Annual DTP drop out rate [(DIP1-DIP3)/DIP1] x 100		6.9%	5%	4%	4%	4%	4%
Annual measles drop out rate (for countries applying for YF)							

* 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

***** The wastage rate is the one used in the Financial Sustainability Plan since the 12% reported in the summary only involved 76 out of 159 districts

***** Hib will be introduced in pentavalent form in January 2009, and pneumo will be introduced in January 2010

Table 3.5: Summary of current and future immunization budget (page 80 of the cMYP)

Cost category	2 005	2 007	2 008	2 009	2 010	2 011	Total 2007-2011
Routine recurrent cost	US\$	US\$	US\$	US\$	US\$	US\$	US\$
Vaccines	4,300	4,703	4,785	11,606	24,087	31,570	76,753
- Traditional vaccines	763	806	837	874	910	942	4 370
- New and underused vaccines	3,538	3,897	3,949	10,732	23,177	30,628	72,382
Injection supplies	445	552	592	637	855	1,019	3,656
Personnel	667	766	884	930	978	1,028	4,586
- Salaries of full-time NIP health workers (central, provincial and local level)	206	237	242	246	251	256	1,233
- Per-diems for outreach vaccinators/mobile teams	263	298	326	356	386	418	1,784
- Per-diems for supervision	198	231	316	328	340	353	1,569
Transportation	390	400	448	472	481	511	2,312
- Fixed strategy and vaccine delivery	52	56	83	90	86	98	413
- Advanced and mobile strategy	337	345	365	381	395	413	1,899
Maintenance and overheads	590	1,684	3,142	2,307	1,641	1,672	10,446
Cold chains	317	1,353	2,602	1,614	976	904	7,450
Other equipment	162	206	414	564	533	634	2,351
Buildings	111	124	126	129	131	134	644
Short-term training	461	474	498	523	550	578	2,623
Social mobilization and IEC	447	483	508	533	560	589	2,673
Disease control and surveillance	513	720	778	841	910	984	4,233
Program management	483	522	549	576	606	636	2,889
Other recurrent costs	345	259	282	355	332	596	1,824
Subtotal Recurrent Costs	8,641	10,564	12,466	18,782	30,999	39,182	73
Vehicles	0	18	405	124	19	137	1
Cold chain equipment	1,142	4,956	2,784	3,058	894	611	12
Other capital equipment	91	534	2,674	1,700	1,741	1,191	7
Subtotal Capital Costs	1,233	5,508	5,862	4,882	2,654	1,939	19
Polio	4,071	2,100	2,193	2,291	2,153	2,499	11,237
Vaccines	2,471	536	551	567	525	601	2,780
Operating costs	1,600	1,565	1,642	1,724	1,628	1,899	8,457
Measles	2,354	0	0	2,849	0	0	2,849
Vaccines and injection supplies	356	0	0	798	0	0	798
Operating costs	1,998	0	0	2,052	0	0	2,052

Yellow fever	0	114	115	116	117	118	580
Vaccines and injection supplies	0	67	67	67	67	67	337
Operating costs	0	47	48	49	50	51	243
NN tetanus	0	1,168	0	1,279	0	1,402	3,849
Vaccines and injection supplies	0	170	0	180	0	191	542
Operating costs	0	998	0	1,099	0	1,211	3,307
Vitamin A 100,000 IU	47	82	86	89	93	97	448
Vaccines and injection supplies	47	10	10	11	11	11	54
Operating costs	0	72	75	79	82	86	394
Vitamin A 200,000 IU	343	1,311	1,370	1,431	1,494	1,560	7,166
Vaccines and injection supplies	343	163	167	171	176	180	857
Operating costs	0	1,149	1,203	1,259	1,318	1,379	6,309
Subtotal Campaign Costs	6,816	4,775	3,765	8,056	3,858	5,676	26,129
Shared costs of staff	5,948	6,303	6,572	6,849	7,134	7,428	34,285
Shared costs of transportation	1,751	1,786	1,821	1,858	1,895	1,933	9,292
Buildings	1	558	448	215	220	188	1,629
Subtotal Shared Costs	7,700	8,647	8,841	8,922	9,248	9,548	45,206
GRAND TOTAL	24,389	29,495	30,934	40,641	46,759	56,345	204,176
Routine immunization (Fixed Strategy)	15,128	21,866	23,961	27,992	35,663	41,645	151,128
Routine immunization (Advanced and Mobile Strategy)	2,446	2,854	3,208	4,594	7,238	9,024	26,919
Immunization campaigns	6,816	4,775	3,765	8,056	3,858	5,676	26,129

Please list in the tables below the funding sources for each type of cost category (if known). Please try and indicate which immunization 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 (page 85 of the cMYP)

		Estimated financing per annum in US\$ (,000)					
Cost category	Funding source	Base year 2005	Year 1 2007	Year 2 2008	Year 3 2009	Year 4 2010	Year 5 2011
Routine recurrent cost (routine immunization)							
1.	National government	1,616	1,106	999	875	1,314	1,425
2.	Local government	1,053	393	434	430	765	635
3.	HIPC	835	2,507	2,350	2,089	3,477	4,158
4.	WHO	563	338	375	385	425	385
5.	UNICEF	264	315	327	322	339	347
6.	GAVI	4,266	4,404	4,213	11,494	23,147	30,098
7.	France		870	1,118	725	670	669
8.	HKI	10	62	62	57	52	37
9.	GTZ	20					
10.	OCEAC	2					
11.	Plan-Cameroon	10					
12.	Rotary			15			
Total		7,023	9,995	9,893	16,377	30,189	37,754
Routine capital costs (routine immunization)							
1.	National government	45	20	500	50	300	150
2.	Local government		5	200	20	100	50
3.	HIPC	1,002	650	850	1,224	1,019	1,137
4.	UNICEF	185				100	
5.	GAVI				100	100	100
6.	France		3,641	3,701	858		
Total		1,232	4,316	5,251	2,252	1,619	1,437
Campaigns							
1.	National government	227	117	483	943	79	144
2.	Local government	100	90	185	631	600	650
3.	HIPC	80					
4.	WHO	2,231	617	467	1,398	467	467
5.	UNICEF	3,577	2,160	1,208	3,405	1,051	2,127
6.	GAVI	80	22	25	22	26	27
7.	HKI	400	217	300	202	202	212

		Estimated financing per annum in US\$ (,000)					
Cost category	Funding source	Base year 2005	Year 1 2007	Year 2 2008	Year 3 2009	Year 4 2010	Year 5 2011
8.	GTZ	10	12	12	12	12	12
9.	Plan-Cameroon	10	21	10	12	9	10
11.	Rotary	100	100	100	100	100	100
TOTAL		6,815	1,196	2,790	6,725	2,546	3,749
<i>Shared costs</i>							
1.	National government	6,989	6,777	7,425	8,234	7,873	8,424
2.	Local government	601	1,030	489	488	975	1,124
3.	HIPC		698	727		200	
4.	UNICEF	20					
5.	GAVI	90		200	200	200	
6.	France		152				
TOTAL		7,700	7,627	8,841	8,922	9,248	9,548
GRAND TOTAL		22,770	23,134	26,775	34,276	43,602	52,488

4. Immunization Services Support (ISS)

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

Table 4.1: Estimate of funds expected from ISS

	Base year	Year 1	Year 2	Year 3	Year 4	Year 5
DTP3 rate of coverage						
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 the 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 authorizing payments and approving plans for expenditure; and if you will continue this in the future.

Major Lessons Learned from Phase 1	Implications for Phase 2
1. The flexibility and ease of mobilizing GAVI funds to implement program activities	Maintain this ease of funds mobilization for the remainder of the program
2. The full amounts of allocated funds do not always reach all recipients at all levels	Strengthen the mechanism for monitoring the management of funds allocated to recipients

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

a) when you would like the support to begin: NA
b) when you would like the first DQA to occur: NA
c) how you propose to channel the funds from GAVI into the country: NA
d) how you propose to manage the funds in-country: NA
e) who will be responsible for authorizing and approving expenditures: NA

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

5. Injection Safety Support NA

- 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 Immunization), and confirm the status of the document: **DOCUMENT NUMBER 5**
- Please attach a copy of any action plans for improving injection safety and safe management of sharps waste in the immunization system (and reference the comprehensive Multi-Year Plan for Immunization). **DOCUMENT NUMBER 6**

Table 5.1: Current cost of injection safety supplies for routine immunization NA

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

Year	Annual requirements		Cost per item (US\$)		Total Cost (US\$)
	Syringes	Safety Boxes	Syringes	Safety Boxes	
20...					

Table 5.2: Estimated supply for safety of vaccination with vaccine NA

(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	$A \times B / 100 \times C$					
E	Standard vaccine wastage factor ⁴	2.0 or 1.6					
F	Number of doses (including wastage)	$A \times B / 100 \times C \times E$					
G	Vaccines buffer stock ⁵	$F \times 0.25$					
H	Number of doses per vial	#					
I	Total vaccine doses	$F + G$					
J	Number of AD syringes (+ 10% wastage) requested	$(D + G) \times 1.11$					
K	Number of re-constitution syringes (+ 10% wastage) requested ⁶	$I / H \times 1.11$					
L	Total of safety boxes (+ 10% of extra need) requested	$(J + K) / 100 \times 1.11$					

¹ GAVI supports the procurement of AD syringes to deliver two doses of TT to pregnant women. If the immunization 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 Estimate of 100% of target number of children is adjusted if a phase-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.):

Among the issues faced by the Expanded Program on Immunization, the country is being called upon to face new challenges with respect to immunization, including the introduction of new vaccines into the routine EIP. Among the foremost objectives and strategies of the revised 2007-2011 complete Multi-Year Plan for the EIP is the introduction of new vaccines by 2011 (Hib in January 2009, pneumo in 2010, and rotavirus in 2011).

The improved immunization coverage and enhanced immunization services we have witnessed in 2002-2007, coupled with a desire to speed up the reduction of infant mortality and morbidity rates, have led us to pursue the introduction of new vaccines.

After the yellow fever vaccine in 2004, viral hepatitis B vaccine in 2005 and *Haemophilus influenzae b*³ (Hib) vaccine in 2009, the time will come for introducing the pneumococcal vaccine in January 2010, in view of the epidemiological burden of these diseases and the cost-effectiveness of immunization.

The introduction of these vaccines will entail significant costs, in particular for procuring the vaccines, bringing the cold chain up to standard, and retraining staff. For this reason, as part of Cameroon's current immunization independence initiative, the Ministry of Public Health now has a credit line in its budget for the procurement of these new vaccines.

In addition, the resources generated by the Debt Reduction Initiative after we reach the completion point (HIPC, C2D and MDRI) will be used in part to gradually assume responsibility for the costs of the new vaccines and the cold chain. The GAVI support will be adjusted against the Government's counterpart financing under the new co-financing policy advocated by GAVI.

(Pages 62, 63 of the cMYP)

Please summarize the cold chain capacity and readiness to accommodate the 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 available positive cold chain capacity is currently 34,600 liters of net volume at the central level; when the pneumo vaccine is introduced in 2010 and the rotavirus vaccine in 2011, the required capacity will be 240,347 liters and 441,142 liters, respectively. This situation is leading the country to implement quarterly stocking at the central level.

The required net positive cold chain capacity at this rate is 60,668 liters in 2009 for a total available volume of 34,600 liters, a difference of 25,487 liters. If any of the equipment is not obtained, the gap will be 18,010 liters in 2010 and 75,686 liters in 2011 when the rotavirus vaccine is introduced.

To address this situation, plans are in place to procure two positive cold chambers by late 2008 using C2D funds and another one using HIPC funds, for a net capacity of 10,714 liters, that is, 45 m³ each. This will give us a total available net capacity of 66,748 liters—sufficient to accommodate the pneumo-7 vaccine until 2011.

When the rotavirus vaccine is introduced in 2011, there will be a gap of 5,943 liters, which will be filled by obtaining another 10,714-liter positive cold chamber using HIPC funds.

³ Data from the sentinel site of the Chantal Biya Foundation, Yaoundé.

The estimated cost of the above-mentioned four cold chambers is approximately US\$511,589.

The current negative cold chain capacity (20,200 liters) amply covers our needs up to 2011, when the estimated requirement will be 7,255 liters.

At the intermediate level, 7 of 10 provinces have largely sufficient storage capacity for 2009-2010. That ratio will decrease to three provinces, however, when the rotavirus vaccine is introduced, if the cold chain is not strengthened to adapt to the additional volume needed.

To address this situation, six provinces with gaps ranging from 1,710 to 8,435 liters will be the priority recipients of cold chambers with a net capacity of 8,333 liters in 2008 through the C2D project. South-West Province, with a 216-liter gap, will be equipped with two 108-liter chest freezers procured with Government funds in 2008.

The stocking rate at the provincial level will be five times per year (every 2.5 months). The estimated cost of this equipment will be approximately US\$377,064.

With an average stocking rate for the districts of 12 deliveries per year, the provinces have enough capacity to store polio vaccine, the only vaccine to be kept at -15 to -25°C. However, they need a volume of 17,583 liters, the transportation of which calls for 25,500 freezer blocks. To recycle the freezer blocks, the provinces will need 43 additional freezers.

We note that the country will need to make exceptional effort at the health district level so that the health districts can introduce pneumococcal vaccines in 2010 and rotavirus vaccines in 2011, while preserving all the antigens according to the standards required. In order for this to happen, the number of additional units of equipment to be acquired will go from 135 refrigerators in 2009 to 161 in 2011.

Additional equipment needed for introducing Hib and Pneumo by 2011 are 161 refrigerators for preserving the vaccines at the health district level, and 43 freezers for recycling the freezer blocks at the 10 provincial storage facilities.

In view of the plan to restore and improve the cold chain equipment, in the 2009 to 2011 period the health districts and zones will need an additional 1,035 refrigerators and 280 freezers, which will be obtained with C2D and Government funding.

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

		Formula	Year 1 2009	Year 2 2010	Year 3 2011
A	Annual positive volume requirement, including new vaccine (specify: _____) (liters or m3)	<i>Sum-product of total vaccine doses multiplied by unit packed volume of the vaccine</i>	240,347 liters	210,440 liters	441,142 liters
B	Annual positive capacity, including new vaccine (specify: _____) (liters or m3)	#	34,600 liters	34,600 liters	34,600 liters
C	Estimated minimum number of shipments per year required for the actual cold chain capacity	A / B	6.95	6.08	12.75
D	Number of consignments / shipments per year	<i>Based on national vaccine shipment plan</i>	4	4	4
E	Gap (if any)	$((A / D) - B)$	25,487 liters	18,010 liters	75,686 liters
F	Estimated cost for expansion	US\$	\$511,589		

Please briefly describe how your country plans to move towards 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).

The achievement of the immunization coverage goals envisioned in the 2007-2011 cMYP depends on the availability of the financial, human and logistical resources to support EIP activities. In addition to effective, timely release of the fixed contributions, additional resources will need to be mobilized to reduce the financing gap. With that object in mind, the financial sustainability strategies will hinge on three factors:

Factor 1: Mobilization of additional resources.

The goal is to continuously increase the financing allocated to the EIP through public authorities (the Government's own funds, HIPC funds, MDRI/C2D resources), communities and partners.

Factor 2: Improved resource reliability, to ensure that the resources will be mobilized in a timely fashion. To that end, a number of actions have been proposed, such as advocacy to streamline procedures for releasing resources, timely mobilization of partners' contributions, transparent management of mobilized resources, and implementation of mechanisms for monitoring the quality of allocated resources.

Factor 3: More effective use of available resources. Actions taken will optimize the use of the human, financial, material and logistical resources to benefit the program.

These strategic factors will enable us to develop appropriate mechanisms to reduce the current financing gaps and increase the financial contributions of the Government, local and national partners, and development partners. The financial sustainability plan, encompassing activities, indicators and targets for each factor, is included in the cMYP (pages 90-93).

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

Disease	Title of the assessment	Date	Results
<i>Streptococcus pneumoniae</i> infections	Burden of Hib Infection at the Chantal Biya Foundation Mother and Child Center	Jan 2002-Jul 2005	Sex ratio: 1.5 /1 in favor of males Age range 2-12 months most represented (58.79%) Bacteriology: - Positive cultures: 140 - Positive soluble antigens: 25 - Germs: - Hib: 41.82%, - S. pneumoniae: 33.33%, - salmonella sp: 15.15%, - N. meningitidis: 7.27% - other germs: 2.42%

If new or under-used vaccines have already been introduced in your country, please give details of the lessons learned 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
1. the need for close monitoring of providers after training in the specifics of the new vaccine	Promote close monitoring of providers after they are trained in the specifics of the new vaccine.
2. the need to pair mass communication with greater ongoing communication at the community level and advocacy at all levels	Strategy focused on greater ongoing communication at the community level in addition to advocacy and awareness raising.
3. the need for proper calculation of vaccine storage volumes at all levels	Arrange for sufficient cold chain capacity at all levels.

Please list the vaccines to be introduced with support from the GAVI Alliance (and presentation):
2010: Pneumococcal vaccine in single-dose liquid form in prefilled syringes (Prenar®)
2011: Oral rotavirus vaccine in single-dose liquid form (Rotateq®)

First Preference Vaccine

As reported in the cMYP, the country plans to introduce *Streptococcus pneumoniae* vaccinations, using pneumo 7 valent vaccine in *single dose liquid form*).

The country has opted for presentation in prefilled syringes because other more appropriate forms of presentation are not available; as soon as those presentations become available, the country plans to change.

The country also intends to move to pneumo 9 or 13 valent as soon as they become available.

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 dose⁴.
- Please summarize the list of specifications of the vaccines and the related vaccination program 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).

⁴ 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: <i>Pneumo 7</i>	<i>Use data in:</i>		Year 1 2010	Year 2 2011	Year 3 20...	Year 4 20...	Year 5 20...
Number of children to be vaccinated with the third dose	<i>Table 3.4</i>	#	728,754	749,887			
Target immunization coverage with the third dose	<i>Table 3.4</i>	#	90%	90%			
Number of children to be vaccinated with the first dose	<i>Table 3.4</i>	#	744,948	783,216			
Estimated vaccine wastage factor	<i>Annex 2a or 2b Table E - Tab 5</i>	#	1.05	1.05			
Country co-financing per dose *	<i>Annex 2a or 2b Table D - Tab 4</i>	\$	0.20	0.23			

* Total price per 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 2010	Year 2 2011	Year 3 20...	Year 4 20...	Year 5 20...
Number of vaccine doses	#	192,900	188,900			
Number of AD syringes	#	NA	NA			
Number of re-constitution syringes	#	NA	NA			
Number of safety boxes	#	2,150	2,100			
Total value to be co-financed by country	\$	587,000	574,500			

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

		Year 1 2010	Year 2 2011	Year 3 20..	Year 4 20...	Year 5 20...
Number of vaccine doses	#	2,740,400	2,308,500			
Number of AD syringes	#	NA	NA			
Number of re-constitution syringes	#	NA	NA			
Number of safety boxes	#	30,425	25,625			
Total value to be co-financed by GAVI (<i>Minimum</i>)	\$	8,335,000	7,021,500			

Please refer to www.unicef.org/french/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: *The country has opted for presentation in prefilled syringes because other more appropriate forms of presentation are not available; as soon as those presentations become available, the country plans to change.*
The country also intends to move to pneumo 9 or 13 valent as soon as they become available.

- 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):

The vaccines supplied by GAVI will be procured through UNICEF. The vaccines supplied by the Government will be procured through the National Center for Procurement of Essential Medicines [Centre Nationale d'Achat des Médicaments Essentiels] (CENAME).

Procurement of the pneumo vaccine will follow the procedure used for procurement of traditional vaccines and new vaccines financed by the Government (yellow fever and DTP-HepB) as described below.

The funds in the budget line allocated for vaccine procurements are released and deposited into an account titled "PEV-CENAME."

On the basis of needs and the technical specifications formulated by the EIP in conjunction with CENAME, the Minister of Public Health gives CENAME instructions to procure the vaccines after a call for bids.

Laboratories pre-qualified by WHO will be the candidates that receive requests for bids. After the contract is awarded, CENAME pays the supplier by bank transfer from the funds made available by the Ministry of Economy and Finance.

Note that the Ministry of Economy and Finance deposits funds into the "PEV-CENAME" account when an order to release funds is signed by the Minister of Public Health in accordance with the cMYP.

(ANNEX N° 7: Funds release order signed by the Minister of Public Health)

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

- *Other vaccine or immunization 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.*

The country has a National Regulatory Authority [Autorité Nationale de Réglementation] (ARN) that records and releases the lots of vaccine.

Quality control is limited to macroscopic analysis for lack of equipment in the National Quality Control Laboratory.

AEFI monitoring has begun and is being intensified.

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

The pneumococcal conjugate 7-valent vaccine will be introduced into the EIP beginning on January 1, 2010 using the same immunization schedule as the pentavalent (DTP-HepB-Hib) that is administered at 6, 10 and 14 weeks for the three doses required for children under one year of age. It will be administered in three separate doses of a 28-day minimum.

This vaccine will be administered at the same time as the pentavalent (DTP-HepB+Hib) in IM injection by syringe at a different injection site.

This vaccine will be introduced at the same time throughout the country. With this object in mind, all field workers will be trained to use it.

The ***Streptococcus pneumoniae*** vaccine chosen is the pneumococcal conjugate 7-valent (Prevnar®) liquid single-dose vial in a prefilled syringe, needle not included.

This vaccine was chosen primarily because of its innocuousness and tolerance by children of this age.

The pneumococcal vaccine is administered at the same time as DTP-Hep B+Hib, by IM injection but at a different injection site.

The pneumococcal vaccine data will be recorded on the same tools as the ones used for DTP-HepB + Hib, to which a column will be added for this vaccine.

Administration of the ***Streptococcus pneumoniae*** vaccine is to begin on January 1, 2010. It will be introduced universally throughout the national territory. There will be no catch-up doses for children over 12 years of age (pp. 65, 71).

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

The funds will be transferred to the Standard Chartered Bank of Cameroon in Yaoundé to an account titled PEV/GAVI.

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

The amounts to be financed by the Government will be paid by funds from the budget line allocated for vaccine procurement. These funds will be released by the Minister of Economy and Finance when an order to release the funds is signed by the Minister of Public Health and will be deposited into an account titled “PEV-CENAME.”

On the basis of needs and the technical specifications formulated by the EIP in conjunction with CENAME, the Minister of Public Health gives CENAME instructions to procure the vaccines after a call for bids.

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

Objective: To achieve 90% immunization coverage nationally and $\geq 80\%$ in every health district and for all antigens including Vitamin A (6-59 months and immediate postpartum) by 2011.

Stages:

DTP-HepB3

2007: 82%

2008: 86%

DTP-HepB-Hib3

2009: 88%

Pneumo

2010: 90%

2011: 91%

The coverage of the new vaccine, as with all the other vaccines, will be monitored by way of monthly data from the health zones/districts at the provincial level by Excel software and at the central level by Epi Info software combined with Excel. After analysis of the data, monthly feedback will be passed on from the provincial level to the districts.

Formative supervision will be carried out at each level (quarterly at the central and provincial levels and monthly at the district level) to correct any problems encountered.

Monitoring will be done monthly and semi-annually.

A post-introduction evaluation will be performed 6 to 9 months after the vaccine is introduced.

Data quality self-evaluation will also be implemented.

New and Under-Used Vaccine Introduction Grant

Table 6.5: calculation of lump-sum

Year of New Vaccine Introduction	No. of births (from Table 3.4)	Share per birth in US\$	Total in US\$
2010	885,269	\$ 0.30	265,581

Please indicate in the tables below how the one-time Introduction Grant⁵ 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	Financing sources
	US\$	US\$	
TRAINING			
Finalize and produce the training document and the informational and public awareness materials	25,000	10,000	GAVI/GOV'T
Train health workers on introduction of pneumococcal vaccines into the routine EIP (DPSP/DS/AS)	103,000	103,000	GAVI
SOCIAL MOBILIZATION, IEC AND ADVOCACY			
Organize a symposium on introducing pneumo into the EIP	7,500	7,500	GAVI
Develop the media plan	1,000	1,000	GAVI
Develop and pre-test, produce and replicate the Social Mobilization messages and media on introducing pneumo into the EIP	30,000	21,000	GAVI/GOV'T
Organize the Awareness/Communication Campaign	10,000	10,000	GAVI
Organize the official launching ceremonies	30,000	20,000	GAVI/GOV'T
Cold chain equipment & maintenance	888,653	0	GOV'T/HIPC
Vehicles and transportation			

⁵ The grant will be based on a maximum award of US\$ 0.30 per infant in the birth cohort with a minimum starting grant award of US\$100, 000.

Program management			
Receive / distribute the vaccine in the provinces, districts and health zones	150,000	48,080	GAVI/GOV'T
Organize a post-introduction evaluation of pneumo 7.	25,000	25,000	GAVI
Carry out applied research activities	5,000	5,000	GAVI
Surveillance and monitoring	158,802		
Carry out pneumo infection surveillance activities	15,000	15,000	GAVI
Human resources			
Waste management	2,523,658		C2D
Technical assistance			
Total	3,813,811	265,580	

➤ 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)

After the ICC meeting of April 24, 2008, during which the submission file containing the revised 2007-2011 cMYP, the GAVI application and the plan to introduce pneumococcal vaccine, the ICC members' attention focused on the issues of expanding the cold chain to accommodate the vaccine, and financial sustainability. [sic]

The principal comments and recommendations from the ICC follow:

WHO:

Encourage the country to pursue the introduction of new vaccines to help reduce infant mortality and morbidity. But it should be noted that procurement of the cold chain planned under the GAVI grant is not included in the grant use table contained in the application. Furthermore, the section on vaccine management, which is an important point in regard to the current presentation of the vaccine, is not budgeted in the finance table.

Chairman of the CNC: Pediatrician.

The Cameroonian pediatrics society is delighted about the introduction of this vaccine and the others to come because of the significance of these infections in pediatrics. With that purpose in mind, **Prof. Joseph Mbede** asserted that there are sufficient arguments in favor of introducing this vaccine in Cameroon, because many children continue to die of pneumonia and pneumococcal meningitis.

Pasteur Center of Cameroon

One important argument is that germs are becoming increasingly resistant to the treatment. This only reinforces the importance of the vaccine. The Center reiterated its availability to help with diagnosis.

Secretary General

The introduction of this vaccine will considerably reduce the investment budget. This encourages public authorities to help finance the vaccines. He again underscored the importance of introducing the pneumococcal vaccine into the EIP, and pointed out that this vaccination is a solution for poor families because it is very cost-effective compared to treating a case of pneumonia or pneumococcal meningitis.

Unicef pointed out that these new vaccines have a cost and that countries should arrange immediately to finance their portion of the cost.

Technical Adviser No. 3 asked whether the co-financing payment would change if the country's economic situation improved. The response was that the co-financing levels proposed by GAVI are the minimum rates, and that countries wanting to finance more can do so. Moreover, in 2010 GAVI will review its co-financing policy.

8. Documents required for each type of support

Type of support	Document	DOCUMENT NUMBER	Duration*
ALL	WHO UNICEF Joint Reporting Form (last two)	3	
ALL	Comprehensive Multi-Year Plan (cMYP)	2	
ALL	Endorsed minutes of the National Coordinating Body meeting where the GAVI proposal was endorsed	1.1	
ALL	Endorsed minutes of the ICC/HSCC meeting where the GAVI proposal was discussed	1.2	
ALL	Minutes of the three most recent ICC/HSCC meetings	1.3.	
ALL	ICC/HSCC workplan for the forthcoming 12 months		
All	Health Sector Strategy	4	
Injection Safety	National policy on injection safety, covering safe medical waste disposal (if separate from cMYP)	5	
Injection Safety	Action plans for improving injection safety and safe management of sharps waste (if separate from cMYP)	6	
Injection Safety	Evidence that alternative supplier complies with WHO requirements (if not procuring supplies from UNICEF)	7	
New and Under-used Vaccines	Plan for introduction of the new vaccine (if not already included in the cMYP)	8	

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

Key for the following Table A1:

CAMEROON

Table A1: Estimated **MINIMUM** number of doses of **Pneumo 7** and associated supplies for injection safety and related budget

[left-hand column:]

- A. Country's co-financing amount
- B. Number of children to receive the first dose
- C. Number of doses per child
- D. Number of doses needed
- E. Estimated vaccine wastage factor
- F. Number of doses needed, including wastage
- G. Vaccines buffer stock
- H. Total number of vaccines needed
- I. Number of doses per vial
- J. **Number of AD syringes NOT APPLICABLE**
- K. **Re-constitution syringes NOT APPLICABLE**
- L. Total number of safety boxes (+ 10% more) needed
- M. Cost of vaccines needed
- N. **Cost of AD syringes NOT APPLICABLE**
- O. **Cost of re-constitution syringes NOT APPLICABLE**
- P. Cost of safety boxes needed
- Q. Cost of transportation for vaccines needed
- R. Cost of transportation for supplies needed
- S. Total funds needed
- T. Total amount of country co-financing
- U. % of country co-financing in proportion to GAVI support

[second column:]

- A. –
- B. Copy from Tab 1
- C. Copy from Tab 1
- D. $B \times C$
- E. Copy from Tab 1
- F. $D \times E$
- G. $F \times 0.25$ or $(F - F \text{ for the previous year}) \times 0.25$
- H. $F + G$
- I. Copy from Tab 1
- J. $(D + G) \times 1.11$
- K. $H / 1 \times 1.11$
- L. $H / 100 \times 1.11$
- M. $H \times (\$ \text{ from Tab 1})$
- N. $J \times (\$ \text{ from Tab 1})$
- O. $K \times (\$ \text{ from Tab 1})$
- P. $L \times (\$ \text{ from Tab 1})$
- Q. $M \times (\% \text{ from Tab 1})$
- R. $(N + O + P) \times (\% \text{ from Tab 1})$

S. $(M + N + O + P + Q + R)$

T. $H * (\$ \text{ from Tab 1})$

U. T / S

[Footnotes:]

1. The buffer stock for vaccines is set at 25%. It is added to the basic stock of doses needed to introduce the vaccine in the entire geographic area.
2. Applies only to lyophilized vaccines; write zero for other vaccines.



Tableau A1: Estimation du nombre **MINIMUM de doses de matériel associé pour la sécurité des injections et budget s'y rapportant**

Pneumo 7

		Formule	2010			2011		
			Total	Gvt	GAVI	Total	Gvt	GAVI
A	Cofinancement du pays		6,58%			7,56%		
B	Nombre d'enfants devant recevoir la première dose	<i>Copier de la feuille 1</i>	744 948	48 986	695 962	783 216	59 228	723 988
C	Nombre de doses par enfant	<i>Copier de la feuille 1</i>	3	3	3	3	3	3
D	Nombre de doses nécessaires	$B \times C$	2 234 844	146 958	2 087 886	2 349 648	177 683	2 171 965
E	Estimation du facteur de perte vaccinale	<i>Copier de la feuille 1</i>	1,05	1,05	1,05	1,05	1,05	1,05
F	Nombre de doses nécessaires, y compris la perte	$D \times E$	2 346 586	154 306	2 192 281	2 467 130	186 567	2 280 563
G	Stock régulateur de vaccins ¹	$F \times 0.25$ or $(F - F \text{ de l'année précédente}) \times 0.25$	586 647	38 576	548 070	30 136	2 279	27 857
H	Nombre total de vaccins nécessaires	$F + G$	2 933 233	192 882	2 740 351	2 497 266	188 846	2 308 420
I	Nombre de doses par flacon	<i>Copier de la feuille 1</i>	1	1	1	1	1	1
J	Nombre de seringues autobloquantes SANS OBJET	$(D + G) \times 1.11$						
K	Seringues de reconstitution SANS OBJET	$H / I \times 1.11$						
L	Nombre total de réceptacles de sécurité (+10% en plus) nécessaires	$H / 100 \times 1.11$	32 559	2 141	30 418	27 720	2 096	25 623
M	Coût des vaccins nécessaires	$H \times (\$ \text{ de la feuille 1})$	\$8 799 698	\$578 646	\$8 221 052	\$7 491 799	\$566 538	\$6 925 261
N	Coût des seringues autobloquantes. SANS OBJET	$J \times (\$ \text{ de la feuille 1})$	\$0	\$0	\$0	\$0	\$0	\$0
O	Coût des seringues de reconstitution SANS OBJET	$K \times (\$ \text{ de la feuille 1})$	\$0	\$0	\$0	\$0	\$0	\$0
P	Coût des réceptacles de sécurité nécessaires	$L \times (\$ \text{ de la feuille 1})$	\$30 605	\$2 013	\$28 593	\$26 056	\$1 970	\$24 086
Q	Frais de transport pour les vaccins nécessaires	$M \times (\% \text{ de la feuille 1})$	\$87 997	\$5 786	\$82 211	\$74 918	\$5 665	\$69 253
R	Frais de transport pour le matériel nécessaire	$(N+O+P) \times (\% \text{ de la feuille 1})$	\$3 061	\$201	\$2 859	\$2 606	\$197	\$2 409
S	Montant total de fonds nécessaires	$(M+N+O+P+Q+R)$	\$8 921 361	\$586 647	\$8 334 715	\$7 595 379	\$574 371	\$7 021 008
T	Cofinancement total du pays	$H \times (\$ \text{ de la feuille 1})$	\$586 647			\$574 371		
U	% de cofinancement du pays par rapport à la proportion du soutien de GAVI	T / S	6,58%			7,56%		

¹ Le stock régulateur pour les vaccins est fixé à 25%. Il s'ajoute au premier stock de doses nécessaires pour introduire la vaccination dans toute région géographique.

² S'applique seulement aux vaccins lyophilisés, inscrire zéro pour les autres vaccins.

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 **Cameroon** hereby requests that a payment be made, via electronic bank transfer, as detailed below:

Name of Institution: (Account Holder)	EXPANDED PROGRAM ON IMMUNIZATION		
	CENTRAL TECHNICAL GROUP		
Address:	MINISTRY OF PUBLIC HEALTH - YAOUNDE		
City - Country:	YAOUNDE – CAMEROON		
Telephone No.:	237 22 23 09 42	Fax :	237 22 23 09 47
Amount in USD:	(To be filled in by the GAVI Secretariat)	Currency of the bank account:	
For credit to: Bank account's title:	PEV/GAVI		
Bank account No.:			
At: Bank's name	STANDARD CHARTERED BANK		

Is the bank account exclusively to be used by this program?

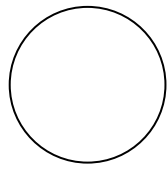
YES (☒) NO (☐)

By whom is the account audited?

Auditing firm to be
chosen by the ICC

Signature of Government's authorizing official:

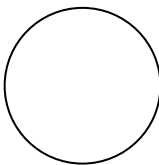
By signing below, the authorizing official confirms that the bank account mentioned above is known to the Ministry of Finance and is under the oversight of the Auditor General.

Name:	André MAMA FOU DA	Seal: 
Title:	MINISTER OF PUBLIC HEALTH	
Signature:		
Date:		
Address and Phone number:		
Fax number:		
Email address:		

SECTION 2 (To be completed by the Bank)

FINANCIAL INSTITUTION	CORRESPONDENT BANK <i>(in the United States)</i>
Bank Name: STANDARD CHARTERED BANK	
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 Two (02) (number of signatories) of the following authorized signatories.	Name of bank's authorizing official
1 Name: Dr BAYE Martina LUKONG	Signature: _____
Title: Director of Family Health	Date: _____
2 Name: Dr NOMO Emmanuel	Seal:
Title: Permanent Secretary, Central Technical Group – EIP	
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 signature of the following officials:

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

Signature of UNICEF representative:

Name

Signature

Date

REPUBLIC OF CAMEROON
Peace - Labor - Fatherland

MINISTRY OF PUBLIC HEALTH

DIRECTORATE OF FAMILY HEALTH

EXPANDED PROGRAM ON IMMUNIZATION

1

2

- 3 **Answers to the conditions to be met to obtain GAVI support for introducing the pneumococcal vaccine**

September 2008

Introduction

Following up on Cameroon's application to GAVI for support to introduce the pneumococcal vaccine into the routine EPI, the Minister of Health received conditional approval by letter No. GAVI/08/213/ir/sk. In this letter the Minister was asked to do the following:

- Review the pneumococcal vaccine cost projections, ensuring that the application for support and the cMYP are consistent;
- Make a more accurate projection of future requirements for resources, followed by a technically sound analysis of the financing gap and the relevant financial viability strategies, in particular with regard to the cold chain. Also, the equipment costs and recurring costs for vehicles and other logistical inputs should be adjusted in Table 3.5 of the application for support;
- Provide details of the purchasing process and quality assurance plans for vaccines purchased locally.

Appropriate answers are provided in this document.

Condition 1: Review the pneumococcal vaccine cost projections, ensuring that the application for support and the cMYP are consistent.

The cost of the pneumococcal vaccine was calculated using a unit cost of USD 5 in the cMYP, whereas the cost considered in the application was the minimum cost, calculated at USD 3 in the form in Annex 2b. After the cMYP and the application were made consistent, and after the unit costs were harmonized at USD 5 per dose of pneumo vaccine, the vaccine coverage objective was modified for the first dose of the 7-valent pneumo vaccine (92% in 2010 and 94% in 2011), and the new data are summarized in the table below:

Breakdown of pneumo vaccine costs between 2010 and 2011

Source	2010			2011			TOTAL
	Govt.	GAVI	Total	Govt.	GAVI	Total	
cMYP	\$568,293	\$14,144,848	\$14,713,141	\$556,402	\$11,816,351	\$12,372,753	\$27,085,894
Application for support (see Annex 2B maximum)	\$568,293	\$14,097,871	\$14,666,164	\$556,402	\$11,929,930	\$12,486,332	\$27,152,496

The slight discrepancy in the costs of the pneumo vaccine that were observed between the cMYP and Annex 2B is due to the difference between the target population generated by the calculation tool in the cMYP and the population projected in the routine EPI (used in Annex 2B).

Tables 6.3, 6.4 and 6.5 of the application have been updated using the "minimum calculation" sheet in Annex 2B.

The new tables from the application for support appear below.

Table 6.3: Characteristics of immunization with the new vaccine

Vaccine: Pneumo 7	<i>Use the data in:</i>		Year 1 2010	Year 2 2011	Year 3 20...	Year 4 20...	Year 5 20...
Number of children to receive the third dose of vaccine	<i>Table 3.4</i>	#	728,754	758,220			
Target vaccine coverage for the third dose	<i>Table 3.4</i>	#	90%	91%			
Number of children to receive the first dose of vaccine	<i>Table 3.4</i>	#	744,948	783, 216			
Estimated vaccine wastage factor	<i>Annex 2a or 2b Table E - sheet 5</i>	#	1.05	1.05			
Country's share per dose *	<i>Annex 2a or 2b Table D - sheet 4</i>	\$	0.20	0.23			

Table 6.4: Share of supplies financed by the country (and cost estimate in US\$)
[Maximum scenario](#)

		Year 1 2010	Year 2 2011	Year 3 20	Year 4 20...	Year 5 20...
Number of doses of vaccine	#	113,659	111,280			
Number of AD syringes	#	NA	NA			
Number of re-constitution syringes	#	NA	NA			
Number of safety boxes	#	1,262	1,235			
Total value of country cofinancing	\$	586,647	574,371			

NA = Not applicable

Table 6.5: Share of supplies purchased by the GAVI Alliance (and cost estimate in US\$) (**[Maximum scenario](#)**)

		Year 1 2010	Year 2 2011	Year 3 20..	Year 4 20...	Year 5 20...
Number of doses of vaccine	#	2,819,574	2,385,986			
Number of AD syringes	#	NA	NA			
Number of re-constitution syringes	#	NA	NA			
Number of safety boxes	#	31,297	26,484			
Total value of GAVI cofinancing (Maximum)	\$	14,553,168	12,315,213			

NA = Not applicable

Condition 2: Make a more accurate projection of future requirements for resources, followed by a technically sound analysis of the financing gap and the relevant financial viability strategies, in particular with regard to the cold chain. Also, the equipment costs and recurring costs for vehicles and other logistical inputs should be adjusted in Table 3.5 of the application for support.

The status of the cold chain and future resource requirements were updated in the Excel cost analysis and financing tool.

Cold chambers

In the former **Excel cost analysis and financing** tool, there were plans for the central level to purchase three cold chambers in 2007 (two using C2D funds and one using HIPC funds). The procedure for acquiring the three cold chambers is underway. As a result, this process was scheduled to for completion by end-2008 in the plan to introduce the pneumococcal vaccine.

Based on the above, these cold chambers were included in the new tool in 2008.

The fourth cold chamber that was included for introducing the rotavirus will be ordered in 2010 instead, using HIPC/GAVI funding; it was also introduced into the new tool.

At the provincial level, in 2008 there are plans to acquire six cold chambers using C2D funds sufficient to accommodate the pneumo in 2010 and the rotavirus in 2011.

Freezers

Requirements related to introducing the new vaccines for the 2010-2011 period, namely 43 freezers for recycling the batteries, and 280 freezers at the district levels, were included in the **Excel cost analysis and financing** tool. This equipment will be acquired using C2D and HIPC funding.

Refrigerators

The 1,035 refrigerators planned for the period from 2009 to 2011 for introducing the pneumo and rotavirus were included in the cMYP.

Nearly all the funding for the cold chain requirements will come from C2D and HIPC funds.

Waste management

In the cMYP there are plans to acquire, install and place in operation 177 incinerators from 2008 to 2011.

The resources that are available through the C2D are not currently sufficient for acquiring 80 pyrolytic incinerators and for training the employees who operate them (Source: C2D budget, EPI component) from 2008 to 2011 at a cost of US\$ 2,523,658. This is the cost that was used in the budget for introduction.

Based on cold chain purchases already made, ¾ of the C2D funding was considered secure in the current cMYP.

Table 15: Revised introduction plan: Additional cold chain equipment requirements for the health districts and health areas in 2009/2010 (pneumo in 2010, rotavirus in 2011)

PROVINCE	Number Of Health	Additional requirements for SSD refrigerators (Number)		Additional requirements for SSD freezers 2009	Additional requirements for refrigerators (Number)
	Districts	2009	2010		Health area 2009-2010
ADAMAWA	8	6	7	20	45
CENTRE	28	10	12	40	100
EAST	13	9	12	17	56
FAR NORTH	28	29	29	40	124
LITTORAL	18	8	17	33	90
NORTH	13	15	15	19	78
NORTHWEST	18	22	22	30	81
WEST	19	17	22	33	70
SOUTH	9	5	9	15	25
SOUTHWEST	19	14	16	33	70
TOTAL	173	135	161	280	739

These figures for equipment were also readjusted in the text of the cMYP on pages 22, 23 and 24 based on Tables 8 and 9, attached in the annexes, as well as Table 37 on page 87.

Analysis of the financing gap and relevant financial viability strategies, in particular with regard to the cold chain

Financing gap with secure and probable financing (revised cMYP)

Composition of the Financing Gap	2008	2009	2010	2011	2008 - 2011
Vaccines and injection supplies		\$0	\$0		
Personnel			\$0	\$584,029	\$584,029
Transport	\$0		\$1		\$1
Activity and other recurring costs		\$0	\$430,467	\$1,277,077	\$1,707,544
Logistics (vehicles, cold chain, etc.)	\$200,936	\$0	\$197,869	\$0	\$398,806
Immunization campaign	\$2	\$1,658,469	\$824,036	\$527,095	\$3,009,601
Financing gap*	\$200,937	\$1,658,468	\$1,452,374	\$2,388,200	\$5,699,980

Financing gap with secure financing only (revised cMYP)

Composition of Financing Gaps	2008	2009	2010	2011	2008 - 2011
Vaccines and injection supplies		\$0	\$0		
Personnel		\$41,999	\$42,000	\$626,029	\$710,029
Transport	\$0	\$25,000	\$25,001	\$25,000	\$75,001
Activity and other recurring costs	\$372,735	\$1,237,569	\$902,917	\$1,811,153	\$4,324,374
Logistics (vehicles, cold chain, etc.)	\$200,936	\$308,582	\$197,869	\$0	\$707,388
Immunization campaign	\$1,529,120	\$6,884,301	\$1,827,146	\$3,962,240	\$14,202,806
Financing gap*	\$2,102,790	\$8,497,451	\$2,994,934	\$6,424,421	\$20,019,597

The secure and probable financing gap fell from US\$ 20,832,468 in the former cMYP to US\$ 5,699,980 because most of the financing considered probable at the time turned out to be secure (C2D funds), and because the HIPC envelope allocated to the EPI was increased to take the second phase of the project into account. The lower financing gap at this point is due to the fact that when the cMYP was written, the status of secure financing for immunization as part of debt forgiveness was not clearly apparent (HIPC/C2D Fund).

This HIPC and C2D funding is primarily for purchasing and maintaining cold chain equipment and for disposing of waste.

The strategy for financing the gap consists of the following three points:

- Lower program costs by:
 - o Lowering vaccine wastage through the open vial policy, the vaccine vial monitor, renovating the cold chain, correctly planning the immunization sessions, strengthening waste monitoring, etc. For example, lowering the wastage rate from 20 to 18% for the yellow fever vaccine and from 5 to 2% for the pentavalent vaccine would save the country about US\$ 500,000 for the period from 2009 to 2011.
 - o Since January 2008, strengthening the integration of the Health and Mother and Child Nutrition Weeks (SASNIM) is making it possible to pool resources that can be used for immunization and lower the shortfall in certain operating costs.
- Increase financing by advocating with new partners and increasing the contribution from the traditional partners, such as the community, NGOs, firms, etc. The same is true for the opportunities provided by the GAVI windows for support to strengthen the health system and support from civil society, which will contribute to financing EPI activities. Consultation will continue in the Ministry of Public Health to obtain maximum benefits from the SWAp Health process now being implemented.
- The government's commitment to provide continuing support to achieve the program objectives by financing immunization activities is indicated in the revised letter of endorsement for the cMYP that was signed jointly in May 2008 by three ministers (Economy, Planning and Land Use, Finance, and Public Health), which is the first page of the document. To this end, the country contributed 40% of operating costs for financing the measles monitoring campaign in 2007.

To ensure sustainable financing, the immunization support funds created by forgiving the debt should gradually be included in the regular government budget as part of the SWAp approach that is now being put in place.

Condition 3: Provide details of the purchasing process and quality assurance plans for vaccines purchased locally

With regard to the quality assurance plans for vaccines purchased locally through the National Supply Center for Drugs and Essential Medical Consumables (CENAME), the country is in compliance with the pharmaceutical regulation in effect. Thus, the program accepts products only from registered laboratories in the country.

A request for proposals was issued for all the vaccines the country purchased in 2007, and the criterion of WHO prequalification of vaccines was required, as were specifications to ensure vaccine quality (a copy of the request for proposals is attached).

The vaccines the CENAME purchased through short-list requests for proposals in 2007 from Serum Institute of India and Sanofi Pasteur were prequalified by the WHO. A check was made to ensure that the vaccines purchased from the authorized suppliers were registered by the National Regulation Authority (NRA) in the country and that they have a currently valid Marketing Authorization.

The National Regulation Authority released all of these vaccines (see the document in the annex).

Of the four tasks that a country that purchases vaccines (such as Cameroon) has to carry out, the NRA is currently carrying out two: registration and releasing the batches.

AEFI surveillance began with monthly reporting and investigating cases of AEFI based on the guidelines given to the provinces/districts and on the list of AEFI to be reported. The cases of AEFI that are reported are submitted every other month to the pharmacovigilance committee expanded to vaccines. This committee, which has been analyzing the data since July 2008, notifies the Pharmacovigilance Center in Sweden if necessary. The actions the committee is to take in cases of severe AEFI are still in the very early stages.

The National Laboratory for Testing Essential Drugs (LANACOME) is responsible for quality control. This Laboratory does not have a standardized unit for inspecting vaccine strains at this time; nonetheless, the following activities are carried out:

- 1) Checking conservation and the cold chain through VVM;
- 2) Inspections of vaccine strain concentration are carried out upon request in a networking arrangement with the French Agency for the Health Safety of Health Products (AFSSAPS) whenever there is doubt as to the origin of vaccines or if vaccines are suspected of causing AEFI.

There are plans to move this laboratory and to build one according to standards, equipped and accredited by the WHO (the moving process is underway).

ANNEXES

Financial viability strategies

The viability strategies under consideration for financing the funding gap and maintaining the EPI's achievements are generally based on the three points identified in the cMYP. They are:

Achieving the objectives of vaccine coverage listed in the 2007-2011 cMYP is contingent on the availability of the financial, human and logistical resources that support the implementation of EPI activities. In addition to effectively releasing resources from firm contributions on time, additional resources must also be mobilized to fill in the financing gap. To this end, the EPI's financial viability strategies will be based on the following three points:

- **Point 1:** Mobilizing additional resources;
- **Point 2:** Improving resource reliability;
- **Point 3:** Improving the effectiveness of the use of available resources.

By implementing the strategic points mentioned above, systems can be developed for closing the current financing gaps and increasing the financial contributions from the government, local and national partners, and development partners.

The different strategic points are detailed below. The indicators and targets for each point are included in the cMYP (74 -75).

Point 1: Mobilizing additional resources

In addition to existing resources for which advocacy will be carried out either to increase them or at least maintain their current levels, other additional sources will be requested.

The Authorities

Government resources come from its own resources, funds from the HIPC Initiative, and various other Multilateral Debt Relief Initiatives (MDRI).

The government's own resources

The government's own resources are used to pay the wages of civil servants and other government employees who are involved in carrying out EPI activities. These own resources will also cover some capital costs and a portion of the program's recurring costs and the immunization campaigns. This source of funding is greater than in the 2005-2007 period. Advocacy will be intensified to further increase the budget using the government's own resources.

HIPC Funds

During the 2007-2011 period HIPC funds will be used to purchase:

- Vaccines and consumables (100% of the traditional EPI vaccines and a growing portion of new vaccines)
- 1 positive cold chamber
- 72 freezers for the provincial delegations and health districts;
- 125 refrigerators;
- One refrigerated truck;
- One truck to transport injection supplies;
- Building 11 warehouses for EPI vaccines and equipment;
- Contributing to equipment maintenance.

Resources from the MDRI/C2D

Moreover, since 2007, under the MDRI, Cameroon has been receiving resources under relief from the French bilateral debt (this system is better known as the Contrat de Désendettement et de Développement - Debt Relief and Development Contract or C2D).

Some of these resources are allocated to the EPI. This funding will go on a priority basis to strengthening/renovating the cold chain, and will help, among other things, with purchasing the following equipment:

- Seven positive cold chambers, each with a gross volume of 40,000 liters, or net conservation capacity of 16,000 liters (one of which is to be installed at the central level to increase storage capacity from 34,600 liters to 50,600 liters); the others will be used to improve vaccine storage capacity in six provinces;
- One 30,000-liter negative cold chamber (gross volume), for a net conservation capacity of 12,000 liters, which will increase storage capacity from 20,200 liters to 32,200 liters at the central level;
- 1,800 refrigerators for the health facilities;
- 80 incinerators;
- Eight electrical generators to improve the quality of vaccine conservation;
- Financing for the cold chain equipment maintenance contract.

Once this additional equipment is acquired, the requirements for cold chain equipment will be fully covered at the central and provincial levels.

In addition to acquiring equipment, the C2D funds will also be used to finance activities to coordinate EPI implementation from 2007 to 2011.

The EPI will advocate with the Ministry of Public Health; in turn, this Ministry will advocate with the Prime Minister for a gradual increase in the budget allocated to Health. The purpose of all of this is:

- To maintain immunization as a high health priority for the government, by strengthening the achievements through implementing vaccine self-sufficiency and introducing new vaccines;
- To steadily and sustainably increase resources to foster the survival of children in general and the EPI in particular.

Communities

Some of the resources that came from recovering costs by providing care in the health facilities, international immunization, and local donations, will support local EPI activities (advanced strategy, supervision, equipment maintenance, etc.). As part of cost recovery, and in accordance with health facility officials, a key for distributing resources from recovered costs was prepared to direct a portion of these recovered costs to immunization activities. This portion is used to purchase fuel, pay for light meals for the advanced strategy workers, and to maintain the cold chain and vehicles.

In this respect, some of the funds (not yet quantified) from recovered costs, the funds from the profits of the pharmacies in the health facilities, contribute to purchasing fuel, paying for light meals for the advanced strategy health care workers, purchasing fuel, and maintaining the cold chain and vehicles [sic].

Partners

Despite the growing involvement of the authorities in financing for immunization, support from foreign partners continues to be of paramount importance. As a minimum, the financial viability strategies will aim to:

- Maintain and even increase the level of support from the traditional partners.
- Include immunization in the contexts of cooperation with the new partners.
- Strengthen the involvement of the NGOs and associations to maximize acceptance by the beneficiary populations.

The objective of maintaining, increasing and involving new partners in funding for immunization will be accomplished through the following activities:

- Strengthening ICC involvement in monitoring EPI activities, performances and the emergence of new EPI requirements;
- Strengthening advocacy by the Minister of Health with the ICC members to increase financing from partners for the activities;
- Incorporate immunization activities into the new frameworks for economic and technical cooperation;
- Strengthening the EPI's role in the health sectoral strategy.

Point 2: Improving resource reliability

As indicated above, the government's contribution to the immunization process is already appreciable. But these resources are often lower due to problems of meeting deadlines for mobilizing resources to be used effectively for EPI activities in accordance with the schedule. To ensure that all resources will be mobilized on time, the following activities will be carried out:

- Advocate to streamline the procedures for releasing resources allocated to the EPI at every level so that all resources are provided on time for EPI activities;
- Raise the awareness of the ICC members to mobilize their contribution to the cMYP budget on time;
- Manage the mobilized resources carefully and transparently;
- Establish systems for monitoring the quality of use of resources allocated by GAVI to strengthen the health system;
- Maintain budgeting procedures for immunization in the broader framework of planning and granting government funds (MTEF: Medium-Term Expenditure Framework).

Point 3: Improving the effectiveness of the use of available resources

The action to be taken under this point will optimize the use of human, financial, material and logistical resources mobilized for EPI activities.

In detail, the goal will be:

- To reduce vaccine wastage rates from 15 to 10 % between 2007 and 2011 for freeze-dried vaccines (yellow fever and measles) and from 15 to 5% for liquid vaccines (DTP-HepB-Hib) in the same period by strengthening the use of the open vial policy and the vaccine vial monitor (VVM) by the players in the field, and by ordering vials with a smaller and smaller number of doses. This decrease of vaccine wastage, for yellow fever for example, with a decrease in wastage from 20 to 18%, and a decrease from 5 to 2% for pentavalent wastage between 2009 and 2011, should save about USD 500,000;
- To strengthen the monitoring of vaccine wastage;

- To reduce dropout rates by strengthening the monitoring of patients lost to follow-up by the community liaisons and other players in social mobilization;
- To have the associations, health services and community rural radio stations sign performance contracts;
- To include projects in immunization with a high impact on child survival in order to improve cost effectiveness; these include Vitamin A, distribution of insecticide-treated nets, etc.
- To set up systems that do a better job of keeping personnel in charge of immunization in their jobs, including community liaisons.

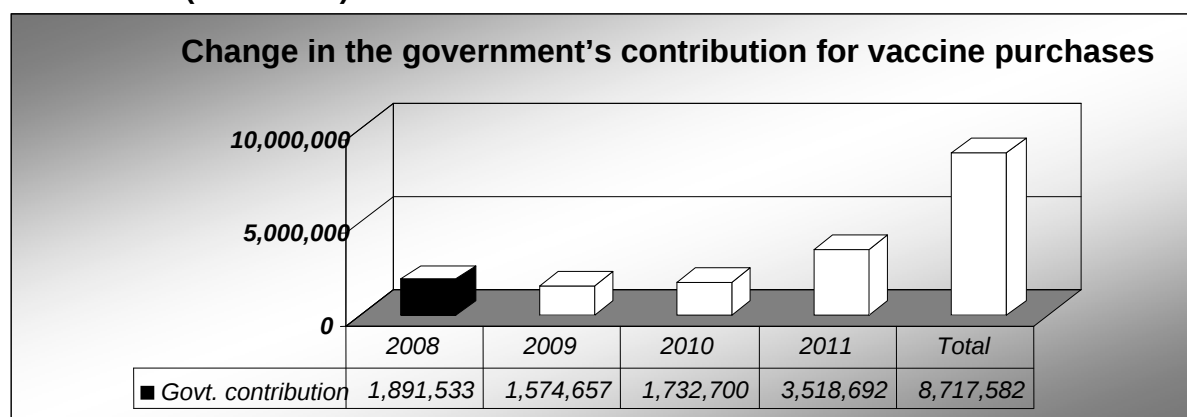
Financing for the pneumo vaccine

The government financed the purchase of vaccines and consumables from 2001 to 2006 with HIPC Initiative funding in the amount of 4,237,573,884 CFAF.

This includes the share of purchasing the new vaccines (yellow fever and DTP-HepB).

In the period from 2007 to 2010, this amount will be 4,514,503,307 CFAF, broken down as indicated in the graph below.

Change in government financing through the HIPC funds for vaccine purchases from 2007 to 2010 (US dollars)



Source: Revised 2007-2011 cMYP revised April 2008

N.B.: The financing for the year 2008 is higher due to the introduction of the Hib, scheduled for July, but postponed to January 2009, without being transferred to the year 2009 in the cMYP.

The pneumo vaccine between 2010 and 2011 will be acquired as is done for DTP-HepB-Hib (cofinanced by the government and GAVI) according to the following cofinancing percentages:

Percentage of government/GAVI cofinancing for introducing the pneumo vaccine according to Annex 2B maximum

Year	2010	2011
GOVT./HIPC	3.87	4.46
GAVI	96.13	95.54

After 2011, the share of the government's financing will increase gradually so that in the long run it is financed entirely using the government's own funds after GAVI withdraws.

Table 3.5: Summary of the current and future immunization budget

	Spending	Future Resource Requirements				
Cost Category	2006	2008	2009	2010	2011	Total 2008 - 2011
Recurring cost	US\$	US\$	US\$	US\$	US\$	US\$
Vaccines	4,462	4,847	12,580	25,625	34,023	77,075
- Traditional vaccines	763	817	854	890	920	3,480
- New and underused vaccines	3,699	4,029	11,726	24,735	33,104	73,595
Injection supplies	424	682	783	1,015	1,191	3,671
Personnel	1,421	1,543	1,685	1,750	1,817	6,796
- Wages for full-time employees (central, provincial and local levels)	273	313	319	325	332	1,288
- Per diem for the advanced strategy/mobile teams	958	1,009	1,054	1,100	1,147	4,311
- Per diem for supervision	190	221	313	325	338	1,197
Transport	596	889	1,123	686	690	3,389
- Fixed strategy and vaccine delivery	223	408	584	227	217	1,437
- Advanced and mobile strategy	373	481	539	459	472	1,952
Maintenance and overhead	651	2,069	2,277	2,591	2,258	9,194
Cold chains	376	1,641	1,756	1,975	1,718	7,090
Other equipment	126	276	366	458	379	1,479
Buildings	149	152	155	158	161	626
Short-term training	518	1,930	560	588	618	3,696
Social mobilization and IEC	502	543	571	600	630	2,343
Disease control and surveillance	665	833	900	973	1,031	3,737
Program management	543	587	617	648	681	2,532
Other recurring costs	406	297	380	355	638	1,669
Subtotal of recurring costs	10,188	14,220	21,476	34,832	43,576	114,103
Cost in Capital						
Vehicles	209	242	132	15	133	523
Cold chain equipment	277	8,454	2,309	1,458	686	12,907
Other capital costs	8	2,284	1,203	1,198	559	5,244
Subtotal of Capital Costs	494	10,980	3,644	2,671	1,379	18,674
Immunization campaigns						
Polio	4,217	2,308	1,857	1,886	1,915	7,966
Vaccines	2,471	551	437	437	437	1,862
Operating costs	1,746	1,757	1,421	1,449	1,478	6,104
Measles	2,532	0	3,509	0	0	3,509
Vaccines and injection supplies	351	0	917	0	0	917
Operating costs	2,181	0	2,592	0	0	2,592
Yellow fever	842	104	11,132	106	106	11,448
Vaccines and injection supplies	744	67	7,126	67	67	7,328
Operating costs	98	37	4,006	38	39	4,121
Neonatal tetanus	760	0	1,352	0	1,482	2,834
Vaccines and injection supplies	172	0	176	0	187	363
Operating costs	587	0	1,176	0	1,295	2,471
Vitamin A 100,000 IU	46	122	127	132	137	518
Vaccines and injection supplies	46	42	43	44	45	173
Operating costs	0	80	84	88	92	345
Vitamin A 200,000 IU	332	1,953	2,030	2,110	2,194	8,287
Vaccines and injection supplies	332	665	683	700	719	2,767
Operating costs	0	1,287	1,347	1,410	1,476	5,520
Subtotal campaign costs	8,728	4,487	20,008	4,234	5,834	34,563
Shared costs						
Shared costs for personnel	6,532	6,925	7,219	7,522	7,834	29,499
Shared costs for transport	1,813	1,849	1,886	1,924	1,962	7,620
Buildings	199	576	271	235	201	1,282
Subtotal of Shared costs	8,544	9,349	9,376	9,680	9,997	38,402
GRAND TOTAL	27,955	39,036	54,503	51,417	60,786	205,742

Cost Category	Spending	Future Resource Requirements				Total 2008 - 2011
	2006	2008	2009	2010	2011	
Routine immunization (Fixed strategy)	15,901	30,237	28,675	38,550	44,411	141,872
Routine immunization (Advanced and mobile strategy)	3,326	4,312	5,821	8,634	10,540	29,307
Immunization campaigns	8,728	4,487	20,008	4,234	5,834	34,563

Table 3.6: Summary of current and future financing and source of funds

Category	Source of financing	Reference year	Year 1 2008	Year 2 2009	Year 3 2010	Year 4 2011
		2006				
Recurring cost (systematic immunization)						
1	National government	1,811	2,146	3,069	2,148	1,822
2	Local government	1,204	850	574	979	748
3	HIPC Fund	1,333	2,751	2,231	3,657	4,481
4	WHO	373	903	623	525	525
5	UNICEF	296	432	427	339	347
6	GAVI	4,949	4,549	12,775	24,906	32,695
7	France	0	2,634	1,719	1,895	1,260
8	HKI	10	47	57	52	37
9	GTZ	20	0	0	0	0
10	OCEAC	2	0	0	0	0
11	Cameroon Plan	10	0	0	0	0
12	ROTARY	0	15	50	0	0
Subtotal		10,007	14,327	21,526	34,501	41,915
Investment costs = capital cost (routine immunization)						
1	National government	8	0	50	300	283
2	Local government	0	200	40	100	50
3	HIPC Fund	209	854	2,527	1,873	1,046
4	WHO	0	0	0	0	0
5	UNICEF	277	0	309	100	0
6	GAVI	0	0	100	100	0
7	France	0	9,725	658	0	0
Subtotal		494	10,779	3,684	2,473	1,379
Immunization campaigns						
1	National government	911	633	1,300	67	628
2	Local government	276	152	733	606	777
3	HIPC Fund	80	0	0	0	0
4	WHO	1,826	1,567	1,731	867	867
5	UNICEF	4,533	1,688	4,533	1,487	2,727
6	GAVI	911	25	9,732	26	30
7	HKI	72	300	257	235	246
8	GTZ	10	12	12	12	12
9	OCEAC	0	0	12	9	10
10	Cameroon Plan	0	10	50	100	10
11	ROTARY	100	100	0	0	0
12	Red Cross	9	0	0	0	0
Subtotal		8,728	4,487	18,359	3,410	5,307
Shared costs						

Category	Source of financing	Reference year	Year 1	Year 2	Year 3	Year 4
		2006	2008	2009	2010	2011
1	National government	7,834	7,633	8,888	8,276	8,873
2	Local government	601	789	488	1,004	1,124
3	HIPC Fund	0	727	0	200	1,046
4	UNICEF	20	0	0	0	0
5	GAVI	90	200	200	200	0
Subtotal		8,544	9,349	9,576	9,680	11,042
Grand total		27,774	38,942	53,144	50,065	59,643

Table 8: Status of cold chamber requirements at the central and provincial levels

Province	Number of districts	Requirements	Existing	2010-2011 gap
Central level		6	2	4
Adamawa	8	1	0	1
Centre	29	1	0	1
East	13	1	0	1
Far North	29	1	0	1
Littoral	18	1	0	1
North	15	1	1	0
Northwest	18	1	0	1
West	20	1	1	0
South	9	1	1	0
Southwest	18	1	1	0
Total	177	16	6	10

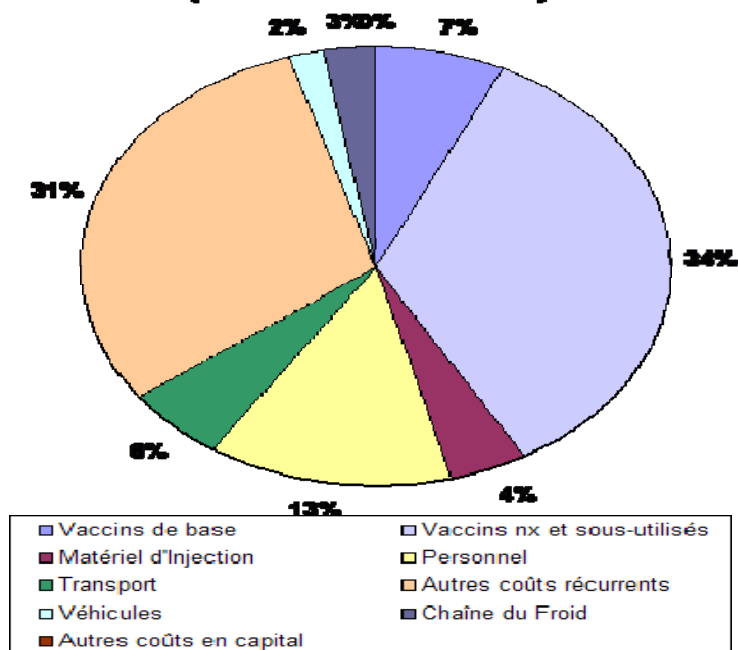
Table 9: Status of freezer requirements at the provincial level

Province	Number of districts	Requirements	Existing	Gap
Central level				
Adamawa	8	3	1	2
Centre	29	12	5	7
East	13	5	3	2
Far North	29	13	6	7
Littoral	18	10	5	5
North	15	9	5	4
Northwest	18	6	1	5
West	20	11	6	5
South	9	6	4	2
Southwest	18	7	3	4
Total	177	82	39	43

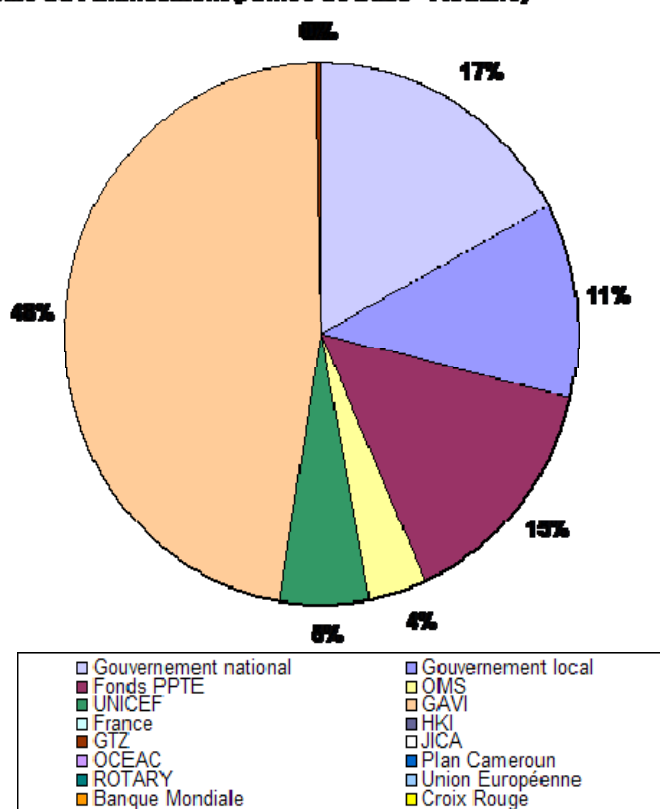
Graphs of the costs and financing for immunization in the cMYP under review

[Translator's note: the following graphs are not accessible. The legends are on page 19.]

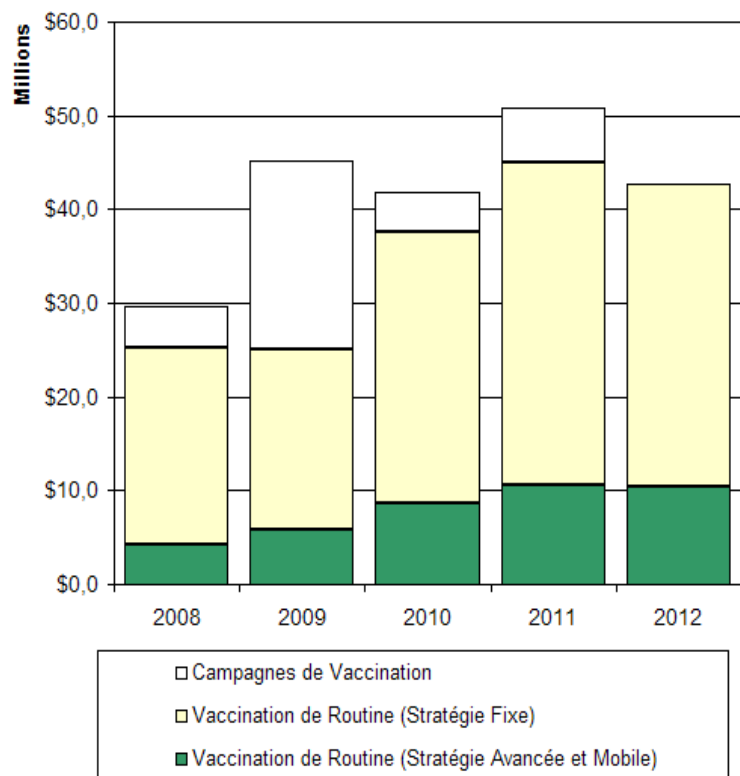
Profil des Coûts (Année de base - Routine)*



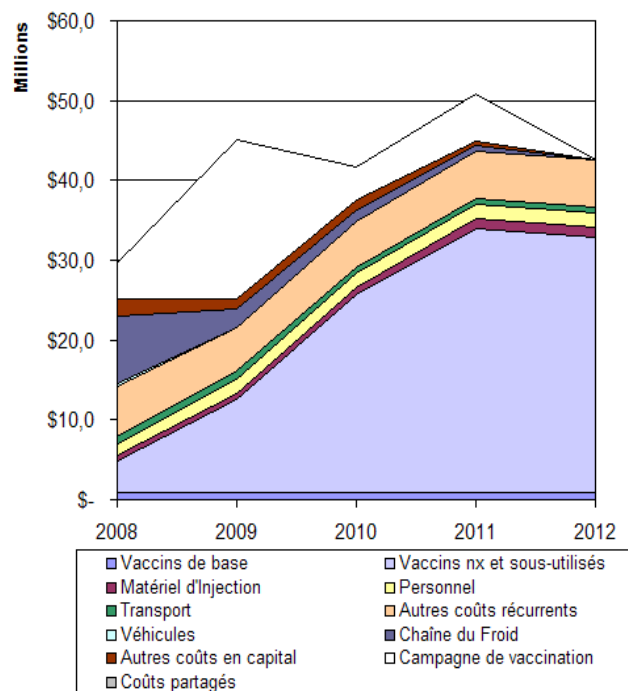
Profil du Financement (Année de base - Routine)*



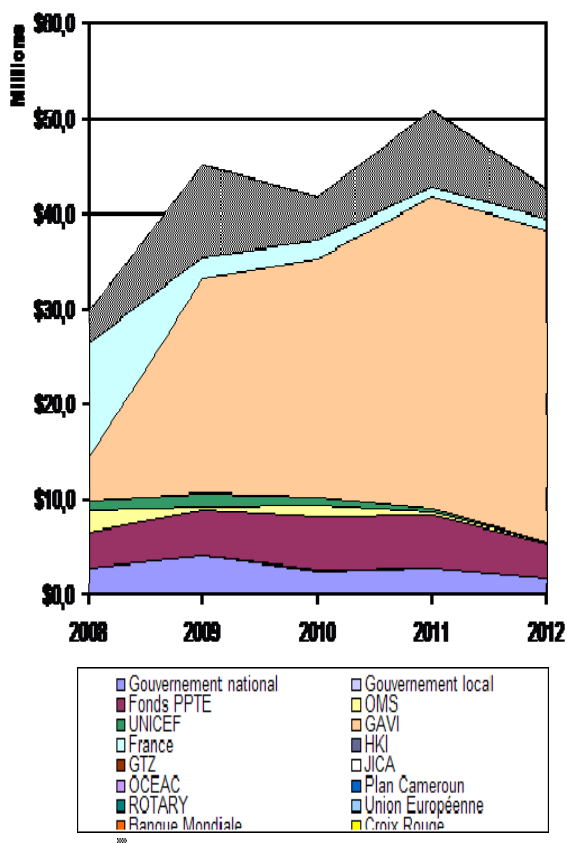
Coûts par Stratégie



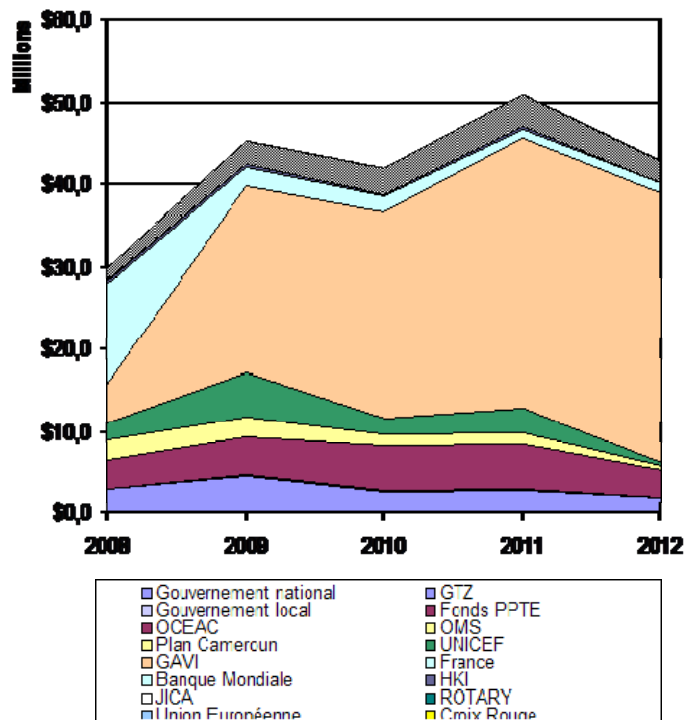
Projection des Besoin en Ressources



Projection du Financement Assuré



Projection du Financement Assuré et Probable



Legends:

Graph 1: Costs Profile (Base year – Routine)

Basic vaccines	New and underused vaccines
Injection supplies	Personnel
Transport	Other recurring costs
Vehicles	Cold Chain
Other capital costs	

Graph 2: Financing Profile (Base year-Routine)

National Government	Local Government
HIPC Funds	WHO
UNICEF	GAVI
France	HKI
GTZ	JICA
OCEAC	Cameroon Plan
Rotary	European Union
World Bank	Red Cross

Graph 3: Costs by Strategy

Immunization campaigns

Routine immunization (fixed strategy)

Routine immunization (advanced and mobile strategy)

Graph 4: Projection of Resource Requirements

Basic vaccines	New and underused vaccines
Injection supplies	Personnel
Transport	Other recurring costs
Vehicles	Cold Chain

Other capital costs	Immunization campaign
Shared Costs	

Graph 5: Projection of Secure Financing

National Government	Local Government
HIPC Funds	WHO
UNICEF	GAVI
France	HKI
GTZ	JICA
OCEAC	Cameroon Plan
Rotary	European Union
World Bank	Red Cross

Graph 6: Projection of Secure and Probable Financing

National Government	Local Government
HIPC Funds	WHO
UNICEF	GAVI
France	HKI
GTZ	JICA
OCEAC	Cameroon Plan
Rotary	European Union
World Bank	Red Cross

SCHEDULE OF ACTIVITIES (LOGISTICS ADDITION)

No.	Activity	Entity in Charge	Targets	Indicator	2008												2009												2010		
					M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M				
12	Acquire and install refrigerators and freezers for vaccine conservation at the site	GTC/EPI DPSP/	DPSP, Health districts and Aires de Santé	Refrigerators are operating																											
13	Acquire and install cold chambers at the site for vaccine conservation	GTC/EPI DPSP	Central level DPSP	Cold chambers are operating at the provincial and central levels																											
14	Acquire and install electrical generators at the site	GTC/EPI DPSP	Central level DPSP	Generators are operating at the provincial and central levels																											
15	Acquire and place in service pyrolytic-type incinerators	GTC/EPI DPSP	DPSP, Health districts	Incinerators are operating at the health district level																											
16	Finalize the national maintenance plan for EPI equipment	MINSANTE/ GTC/EPI	DPSP, Health districts	Document is available																											

Documents attached

- Tool for calculating cMYP costs, September 2008
- Annex 2B Maximum Scenario
- Copy of the request for proposals
- Certification of batch release
- Updated Tables 3.5 and 3.6