REPUBLIQUE DU CAMEROUN
Paix – Travail - Patrie

MINSTERE DE LA SANTE PUBLIQUE

PROGRAMME ELARGI DE VACCINATION

GROUPE TECHNIQUE CENTRAL

REPUBLIC OF CAMEROON
Peace – Work – Fatherland

MINISTRY OF PUBLIC HEALTH

EXPANDED PROGRAMME ON IMMUNIZATION

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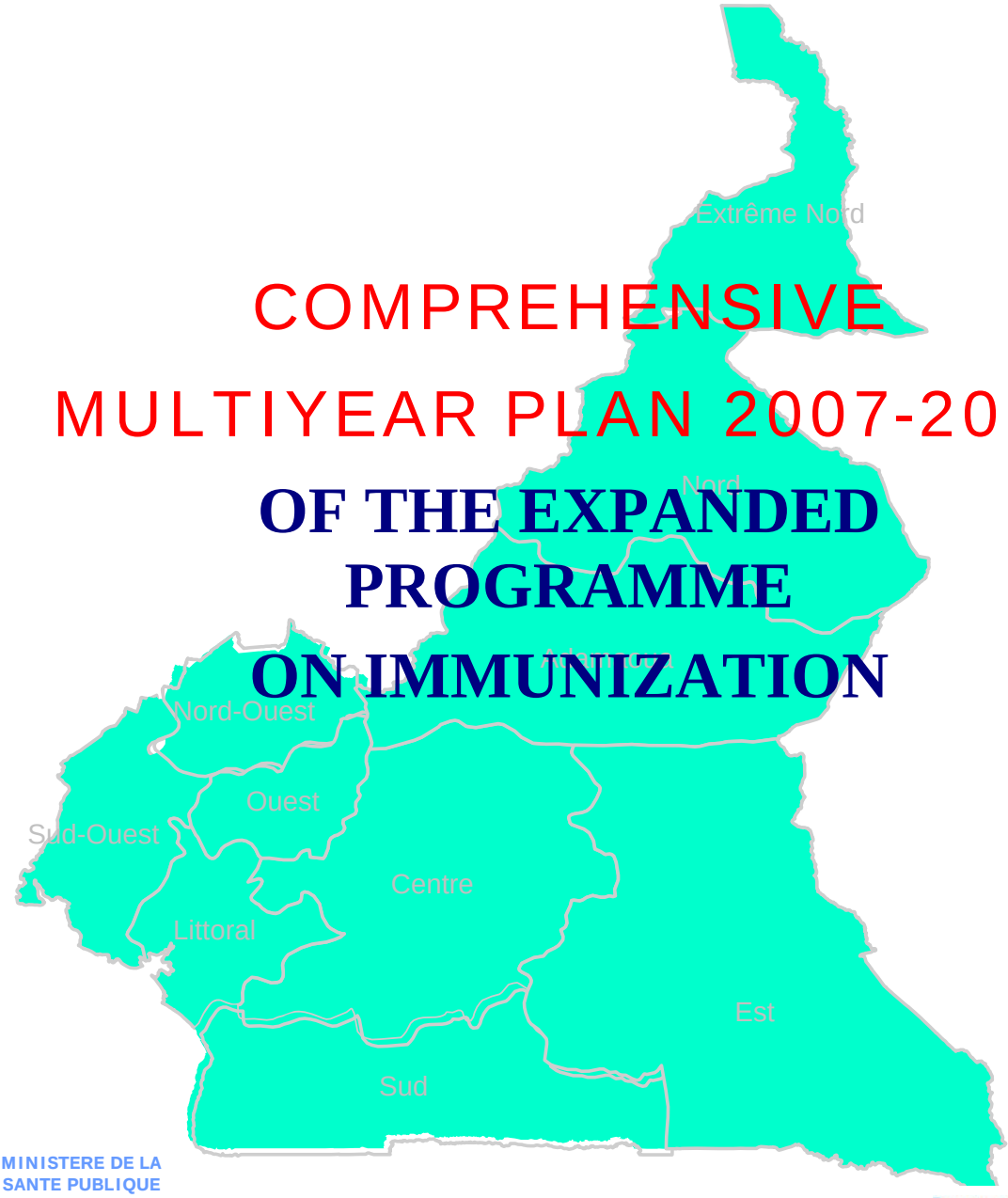

COMPREHENSIVE MULTIYEAR PLAN 2007-2011

OF THE EXPANDED PROGRAMME ON IMMUNIZATION

MINISTERE DE LA SANTE PUBLIQUE

October 2006

Programme Elargi de Vaccination

REPUBLIQUE DU CAMEROUN
Paix – Travail – Patrie

REPUBLIC OF CAMEROON
Peace – Work – Fatherland

LETTER ENDORSING THE COMPLETE MULTI-YEAR PLAN FOR THE EXPANDED PROGRAMME ON IMMUNIZATION OF CAMEROON

To improve the quality of life of the Cameroonian people by implementing the Poverty Reduction Strategy, the Government has made it an objective of its Sectoral Health Strategy to reduce the levels of morbidity and mortality due to vaccine-preventable diseases. More specifically, the aim is to achieve an immunization coverage rate of at least 90 per cent by 2011 and to maintain a high level for the various target groups concerned. This is in line with the Millennium Development Goals (MDGs) and the new Global Immunization Vision and Strategy, to which our country has subscribed.

Having observed with satisfaction the clear improvement in the immunization coverage rate recorded by the Expanded Programme on Immunization (EPI), which moved from 43 per cent 2001 to 79.7 per cent in 2005, and to ensure the sustainability of financing for immunization activities under this Programme, the Ministry of Public Health, with the support of Cameroon's development partners, has just formulated a Comprehensive Multiyear Plan (CMP) for 2007-2011.

Chaired by His Excellency the Minister for Public Health, the Inter-Agency Coordination Committee (ICC) met on 27 October 2006 to examine and validate this Comprehensive Multiyear Plan (CMP). Those attending included representatives of the Ministry of Planning, Development Programming and Land Management, and of the Ministry of Economy and Finance.

On the strength of the resolutions adopted at that meeting, the Government and partners have expressed their commitment as follows:

- the Cameroonian Government undertakes to do the utmost to eliminate the financial gaps in the Comprehensive Multiyear Plan for 2007-2011 and to attain the objectives of its Expanded Programme on Immunization;

- despite the uncertainties associated with their two- or five-yearly budget programming, the partners undertake to support the Cameroonian Government in attaining the EPI objectives and in implementing the Comprehensive Multiyear Plan;

- the Comprehensive Multiyear Plan will be readjusted jointly every year. The Government and its partners will endeavour to find the means by which to attain the goals set.

Yaoundé,

The Minister of Public Health

The Minister of Economy and Finance

The Minister of State, Minister of Planning, Development Programming and Land Management

S U M M A R Y

ACRONYMS AND ABBREVIATIONS

AAV:	Yellow Fever Vaccine
ABF :	*Analyse des Besoins de Formation* Training needs analysis
AD:	Auto-Disable Syringe
AFD:	French Development Agency
AFO:	Administrative and Financial Office
AFP:	Acute Flaccid Paralysis
Ag:	Antigen
AHT:	Arterial Hypertension
AIDS:	Acquired Immune Deficiency Syndrome
APIR:	Adverse Post-Immunization Reactions
BCG :	Bacillus Calmette-Guérin (vaccine)
BdS:	Safety Box
C2D :	*Contrat de Désendettement et de Développement* Debt Reduction and Development Contract
CBS:	Head of Health Office
CBSE:	Head of Child Survival Office
CC:	Cold chain
CCC:	*Communication pour le Changement de Comportement* Communication for Behavioral Change
CDC:	Centers for Disease Control
CEMAC:	*Communauté Économique et Monétaire de l'Afrique Centrale* Central African Economic and Monetary Community
CENAME :	*Centrale Nationale d'Achat des Médicaments Essentiels* National office for the purchase of essential medicines
CMA:	*Centre Médical d'Arrondissement* Arrondissement Medical Centre
CMP:	*Plan Pluriannuel Complet* Comprehensive Multiyear Plan
CSPSC:	*Chef de Service Provincial de la Santé Communautaire* Head of the Provincial Community Health Service
CSSD:	*Chef de Service de Santé de District* Head of the District Health Service
CTG:	Central Technical Group
DCOOP:	Cooperation Division
DED:	Department for the Eradication of Disease
DHS:	District Health Service
DPM:	*Direction de la Pharmacie et du Medicament* Directorate for Pharmaceuticals and Medicines
DQA:	Data Quality Audit
DRFP:	*Direction des Ressources Financières et du Patrimoine* Directorate for Financial Resources and Property
DTP Hep B:	Diphtheria, Tetanus, Pertussis and viral Hepatitis B (tetravalent vaccine)
DTP HepB-Hib:	Diphtheria, Tetanus, Pertussis, viral Hepatitis B and *Haemophilus Influenzae* type b (pentavalent vaccine)
DTP:	Diphtheria, Tetanus, Pertussis (vaccine)
ECCAS:	Economic Community of Central African States
EDSC:	*Enquête Démographique et de Santé – Cameroun* Population and Health Survey - Cameroon
EPI:	Extended Programme on Immunization
FHD:	Family Health Directorate
FSP:	Financial Sustainability Plan
GAVI:	Global Alliance for Vaccines and Immunization

GDP:	Gross Domestic Product
GF:	Global Fund
GIVS:	Global Immunization Vision and Strategy
GOPD:	General Office of Public Debt
Govt:	Government
GTZ :	German Technical Cooperation
HD:	Health District
HIPC:	Heavily Indebted Poor Countries (initiative)
HIV:	Human Immunodeficiency Virus
HKI:	Helen Keller International
HRD:	Human Resources Directorate
HSS:	Health Sector Strategy
IC:	Immunization Coverage
ICC:	Inter-Agency Coordination Committee
IDA:	International Development Association
IGSP:	*Inspection Générale des Services Pharmaceutiques* Inspectorate-General of Pharmaceutical Services
IHC:	Integrated Health Centre
IMF:	International Monetary Fund
IPC:	Inter-Personal Communication
ISS:	Immunization Strengthening Services
JICA:	Japanese International Cooperation Agency
LB:	Live Births
LID:	Local Immunization Days (against poliomyelitis)
MDG	Millennium Development Goal
MEAS:	Measles Vaccine
MINEFI:	Ministry of Economy and Finance
MINPLAPDAT	Ministry of Planning, Development Programming and Land Management
MLM:	Mid-Level Management (EPI management course)
MNT:	Maternal and Neonatal Tetanus
MPH:	Ministry of Public Health
MRA:	Minimum Range of Activities
MTEF:	Medium-Term Expenditure Framework
NGO:	Non-Governmental Organization
NID:	National Immunization Day (against poliomyelitis)
OCEAC:	*Organisation pour la Coordination de la lutte contre les Endémies en Afrique Centrale* Organisation for Coordination of the Control of Endemic Diseases in Central Africa
OPV:	Oral Polio Vaccine
PCIME:	Integrated coverage of child diseases
PPHD:	Provincial Public Health Delegation / Delegate
PRGF:	Poverty Reduction and Growth Facility
PRSP:	Poverty Reduction Strategy Paper
PS/CTG-EPI	Permanent Secretary, Central Technical Group of the Expanded Programme on Immunization
PVS:	Wild Poliovirus
RED:	Reaching Every District
RH:	Reproductive Health
SASDE:	Child Survival and development Acceleration Strategy
SNCT:	Senior nursing care technician
SSP:	Primary Health Care
SWAP:	Sector-Wide Approach
SWOT:	Strengths, Weaknesses, Opportunities, and Threats
TT:	Tetanus Toxoid Vaccine

UHC:	University Hospital Centre
UNDP:	United Nations Development Programme
UNFPA:	United Nations Population Fund
UNICEF:	United Nations Children's Fund
USAID:	United States Agency for International Development
WB:	World Bank
WHO:	World Health Organisation
YF:	Yellow Fever

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ACKNOWLEDGMENTS

The Government of Cameroon, through the Minister of State, Minister of Planning, Development Programming and Land Management, the Minister of Public Health and the Minister of Economy and Finance, expresses its gratitude to the development partners and to all persons and entities having contributed to the elaboration of this document.

We are particularly grateful to WHO, UNICEF and GAVI and to all the other development partners for their constant support of Cameroon's health policy in general and the Expanded Programme on Immunization in particular.

Our gratitude goes also to the experts in the technical group responsible for elaborating the 2007-2011 Comprehensive Multiyear Plan for the Expanded Programme on Immunization (EPI) who helped produce this document, as well as to the health personnel whose task it is to monitor the implementation of this Plan.

SUMMARY

To improve the quality of life of the Cameroonian people through implementation of the Poverty Reduction Strategy and the National Population Policy, one of the objectives set by the Government in its Sectoral Health Strategy is to reduce the levels of morbidity and mortality due to vaccine-preventable diseases. More specifically, the aim is to achieve an immunization coverage rate of at least 90 per cent by 2011 and to maintain that level in the various target groups concerned. This is in line with the Millennium Development Goals (MDGs), to which our country has subscribed.

With the support of Cameroon's development partners, the Ministry of Public Health has drawn up this Comprehensive Multiyear Plan so as to ensure the proper harmonisation and improved implementation of the Expanded Programme on Immunization (EPI).

- The CMP refers to the Global Immunization Vision and Strategy (GIVS) for 2006-2015. It is mindful of ethics, it takes account of the findings of the 2005 Global EPI Review, and includes the integration of activities and strengthening of the health system, as well as the five operations and three support components of immunization systems, namely:
- service delivery;
- quality supplies of vaccines and inputs;
- social mobilisation;
- epidemiological surveillance;
- logistics;
- capacity building;
- management;
- financing.

CHALLENGES FACING THE EXPANDED PROGRAMME ON IMMUNIZATION

After a phase of steady expansion of the immunization coverage rate over the past five years from 43 per cent in 2001 to 79.7 per cent in 2005 (DTP-HepB3), the country must now meet new immunization challenges such as:

- achieving an immunization coverage rate of at least 90 per cent;
- consolidating the vaccine independence initiative;
- injection safety;
- organizing immunization campaigns to eradicate, eliminate and control certain handicapping and fatal diseases such as poliomyelitis, measles, tetanus and yellow fever;
- the continued introduction of the new vaccines in the routine EPI;
- the need to maintain the financing secured from the State and from bilateral and multilateral partners;

Meeting the above challenges calls for the implementation of effective strategies and substantial resource mobilization.

The economic crisis that affected the country for over a decade had significantly reduced resource allocations to the programme. That reduction was compounded by the withdrawal of some partners (USAID, Belgian Cooperation), with a resulting contraction of immunization coverage, the emergence of epidemics such as measles, and the re-emergence of cases of wild poliovirus infections.

Since 1997, Cameroon has again been showing economic growth of around 4.5 per cent and has held inflation below 3 per cent. In October 2000, the country reached the decision point under the HIPC

(Heavily Indebted Poor Countries) initiative, and the resources generated by debt relief were allocated as a matter of priority to the social sectors, particularly education and health.

In April 2006, Cameroon reached the HIPC completion point and could therefore access other resources emanating from bilateral debt cancellations, in particular the Debt Reduction and Development Contract (C2D) with France. In addition to the support from its traditional partners and funds from the GAVI Alliance, the country has been receiving support from the Global Fund to fight AIDS, Tuberculosis and Malaria since October 2004.

These various initiatives are helping to increase the resources available to the health sector, and are improving the outlook for the EPI.

OBJECTIVES AND STRATEGIES OF THE PROGRAMME

The Comprehensive Multiyear Plan for 2007-2011 has set the following goals:

- achieve an immunization coverage rate of 90 per cent at national level and 80 per cent in all health districts (HDs) for all infant antigens including Vitamin A (6-59 months, post-partum) by 2011;
- introduce new vaccines into the EPI by 2011;
- step up communication to promote the EPI in all HDs;
- achieve satisfactory surveillance of EPI target diseases in at least 80 per cent of HDs by 2011;
- reach the pre-certification level in the eradication of poliomyelitis by 2008;
- eliminate maternal and neonatal tetanus in Cameroon by 2011;
- control yellow fever in Cameroon by 2011;
- control measles in Cameroon by 2011;
- ensure the supply of quality vaccines and the adequate equipment of health structures by 2011;
- intensify the practice of injection safety in all health entities by 2011;
- ensure the efficient and effective management of the EPI in at least 80 per cent of programme structures by 2011;
- implement at least 80 per cent of the training plan activities by 2011;
- increase EPI funding by 50 per cent by 2011 (FSP);
- inclusion of additional health interventions in all HDs by 2011.

The three categories of implementation strategies are as follows:

Technical strategies:

- strengthening the Reaching Each District approach and the Child Survival and Development Acceleration Strategy;
- bottom-up planning;
- monitoring/evaluation for action;
- reducing the dropout rate;
- reducing the vaccine wastage rate;
- stepping up operational research for immunization;
- organising immunization campaigns: responding to the emergence of any cases of polio, campaigns against measles, yellow fever and maternal and neonatal tetanus;
- stepping up hygienic childbirth practices;
- improving injection safety;
- introducing new vaccines, especially the *haemophilus influenzae b* vaccine in 2008 and the *rotavirus* vaccine in 2011;

- staff motivation (management);
- building up staff;
- buttressing logistics in order to make the Provincial EPI Units created and the health districts operational, including equipment maintenance;
- stepping up advocacy, social mobilisation, and communication for behavioural change;
- strengthening active surveillance with priority on certain locations and intensifying action in response to epidemics;
- activities to ensure financial sustainability, especially by increasing government resources as well as the contribution from partners and from the community.

Strategies to improve the integration of services:

- coordination of data management in respect of Vitamin A supplementation;
- PCIME (Integrated Coverage of Child Diseases);
- integration of health and immunization services into emergency and disaster planning.

Strategies to help buttress the health system:

- developing integrated planning and monitoring at all levels;
- integrated follow-up/evaluation;
- improving coordination at the different levels of the system;
- developing local partnership.

EVOLUTION AND PROJECTION OF PROGRAMME COSTS

To achieve its long-term goals, the EPI will have to meet appreciable financial needs arising from the operational strategies being put in place.

Implementing these strategies will engender considerable programme costs for the EPI 2004-2013. The overall projected cost (including shared capital and staff costs) is USD 165.879,455, i.e. an average of USD 33,175,891 per annum. The introduction of the pentavalent *Haemophilus Influenzae b* vaccine in 2008 is significantly increasing recurrent costs.

FUNDING CHALLENGES

The projected costs and assured funding for implementing the EPI objectives over the period 2007-2011 show a financial gap of some USD 51,796,315 by comparison with assured financing, and USD 21,602,796 by comparison with assured and probable funding.

Reducing these financial gaps is contingent on the degree of commitment on the part of the Government and its partners, the assurance of a minimum of State funding and the implementation of effective strategies to mobilize additional resources. Objectives will be reoriented as and when necessary.

But reducing these financial gaps will depend above all on the future impetus given by the Ministry of Public Health to the EPI, and on the State's ability to mobilize resources for implementing this policy. The restructuring of the EPI by Ministry of Public Health Decision No. 0333/MSP/CAB of 29 July 2002 signals the Government's genuine willingness to give impetus to the programme and achieve the stated objectives.

The State undertakes to increase its share of the budget with a view to ensuring the programme's sustainability. It will ensure that its commitments are respected, and may even allocate additional resources. This will depend on maintaining the GDP growth rate at around the 5 per cent foreseen for the coming decade.

Tools and process indicators are being out instituted to monitor and assess financial sustainability in regard to:

- attaining the stated goals
- the financial equilibrium of the EPI;
- adequate resource mobilization;
- securing identified funding;
- effective and efficient use of resources.
- the impact on the health system

1. INTRODUCTION

Vaccine-preventable diseases are still one of the leading causes of morbidity and mortality in Africa in general, and in Cameroon in particular.

It was against that backdrop that an external global EPI review was conducted in Cameroon in 1999, leading to the formulation of the multiyear plan covering the 2001-2005 period. It addressed some challenges pertaining to institutional aspects, the management of the immunization programme, logistics, social mobilisation and advocacy, as well as the programme's costs and funding.

The formulation of the 2007-2011 Comprehensive Multiyear Plan (CMP) is warranted by the expiry of the preceding multiyear plan 2001-2005, and in consideration of the following factors:

- the new Global Immunization Vision and Strategy (GIVS),
- the pursuit of the Millennium Development Goals (MDGs) in the framework of the country's Health Sector Strategy;
- the guidelines of the WHO 2006-2009 Regional Plan for the EPI;
- the needs for GAVI II;
- the findings of the 2005 EPI global review

Moreover, the World Health Assembly held in May 2005 in Geneva adopted the GIVS for 2006-2015, calling, *inter alia*, on all countries to effect the following by 2010:

- bring the routine immunization coverage rate to 90 per cent at national level, with at least 80 per cent coverage in each health district and for all EPI antigens;
- reduce mortality from measles by 90 per cent worldwide as compared to the 2000 rate.

The 2007-2011 Comprehensive Multiyear Plan for Cameroon's EPI will therefore be the guiding framework for those at national level responsible for setting strategies, standards and procedures, as well as for attaining the programme objectives set for the next five years.

2. SITUATION ANALYSIS OF THE PROGRAMME

2.1. **COUNTRY CONTEXT**

2.1.1. Geographic and demographic situation

The Republic of Cameroon is a Central African country extending from the Gulf of Guinea to Lake Chad, lying between 2 and 3 degrees latitude North and 9 and 16 degrees longitude East. Its geographic location accounts for the diversity of its climate (equatorial and tropical) and its natural landscape. On the basis of this diversity, the country may be subdivided into four epidemiological areas:

- the coastal area, covering the Littoral, South and South-West provinces, with abundant precipitation;
- the sub-Sahelian area, covering the provinces of Adamaoua, the North and Far North;
- the forest area, covering the provinces of the Centre, South and East, with a humid and rainy climate;
- the high-plateaux region, covering the provinces of the West and Northwest, characterized by high population levels.

Cameroon has a surface area of some 475 650 sq. km. It is bounded on the East by the Central African Republic, on the Northeast by Chad, on the South by Congo, Gabon and Equatorial Guinea, on the Southwest by the Atlantic Ocean, and on the West by Nigeria.

With an annual growth rate of 2.9 per cent, the population is an estimated 18 million in 2006, based on projections made from the 1987 census data. According to the same projections, the country will have some 19,672,646 inhabitants in 2009 and 20,830,204 in 2011. The target population of children to be vaccinated (0 to 11 months) will thus rise from 722,232 in 2006, 743,177 in 2007, 764,729 in 2008, 786,906 in 2009, 809,726 in 2010 and 833,208 in 2011. The annual growth rate varies depending on the region and whether it is an urban or rural area[1]. Concomitant with this demographic pressure are a high level of urbanization (some 55 per cent of the population now lives in urban areas) and the development of spontaneous settlements by the poor in areas with difficult access to health services.

Cameroon has 10 administrative provinces, 58 departments (*départements*), 269 districts (*arrondissements*) and 54 administrative districts, and displays a high level of cultural diversity with over 230 ethnic groups and two official languages (French and English). The main religions are Christianity, Islam and Animism.

2.1.2. Macroeconomic situation

After a period of steady growth until the mid-1980s, Cameroon went into economic crisis as of 1986.

The 1990s were marked by the devaluation of the CFA franc and other structural and sectoral reforms that led to renewed growth and the consolidation and/or restoration of macroeconomic balances**.**

Since 1994, Cameroon has been gradually returning to growth thanks to the implementation of economic policies based on structural and monetary adjustment and the resulting gains in competitiveness. After successfully implementing its first economic and financial programme

[1] This data will again be updated as soon as the figures from the 2005 general population census become available.

between 1997 and 2000 supported by an IMF Enhanced Structural Adjustment Facility (ESPF), the Cameroonian authorities concluded a second programme in December 2000, supported by a Poverty Reduction and Growth Facility (PRGF).

For the 1997 to 2003 period, economic growth averaged 4.7 per cent and inflation was kept below 3 per cent per annum (2.9 per cent in 2003)[2]. Per capita GDP nevertheless fell from USD 655 in 1997 (UNDP 1999) to USD 521 in 2000/2001, rising again to USD 587 in 2002 (CEA/BAC 2004).

Cameroon has recorded good macroeconomic performances at the start of this new millennium and has consequently been admitted to the HIPC (Heavily Indebted Poor Countries) initiative, having reached the decision point in October 2000.

It has implemented the programmes formulated in the Poverty Reduction Strategy Paper (PRSP) approved by the Bretton Woods Institutions in April 2003, and reached the completion point in April 2006.

Yet Cameroon remains a poor country:

- according to the second Cameroonian Household Survey (ECAM II), two persons in five (40 per cent) were living below the poverty line in 2001, estimated at CFAF 232,547 per adult equivalent and per annum.
- the activity rate for the population aged 15-64 years was 66 per cent in 1987 (second RGPH); it was 72 per cent in 2001 (ECAM II), by ILO standards.
- school attendance (6-14 age group) was 73 per cent in 1987 and an estimated 79 per cent in 2001.
- the literacy rate was 47 per cent in 1987, and an estimated 68 per cent in 2001; it remains very low for women, however (55 per cent).

The resulting additional resources - some CFAF 37 billion for 2001/2002 and CFAF 77 billion for 2003[3] - have made it possible to bolster the basic social services, mainly education and health (combating malaria and HIV/AIDS, prevention of vaccine-preventable diseases and staff recruitment).

Up to the end of 2003, the macroeconomic situation was better than had been foreseen in the central scenario of the PRSP. Indeed, real GDP growth was 5.0 per cent versus the 4.5 per cent anticipated under the central scenario. This was mainly the result of the 7.7 per cent growth in the agricultural subsector of food products (as compared to 3.4 per cent) and the 1.9-point gain in the growth rate of tertiary sector (7.9 per cent versus 6 per cent). Growth in the secondary sector was nevertheless three points below expectations. This growth was reinforced by falling inflation, which came in at 0.6 per cent below the level foreseen in the PRSP.

In the light of the results for 2003, Cameroon's growth prospects were good, and justified the main benchmarks used in the central scenario of the PRSP. But 2004 macroeconomic and budgetary performances became seriously derailed from the guidelines laid out in the Economic and Financial Programme, thereby departing from the PRSP framework, which had been aligned with that Programme.

In 2004, Cameroon failed to reach the completion point under the HIPC initiative because it did not meet the requirements agreed with its technical and financial partners. Fiscal slippage was the chief reason given for this failure. The savings expected from debt and debt service remissions could not

[2] Poverty Reduction Strategy Paper, April 2003, Government of Cameroon
[3] Finance Act No. 2002/014 of 30 December 2002

therefore be mobilised. To avoid a second failure to reach the completion point, drastic fiscal measures were taken. They have significantly impacted the purse strings of both companies and households. Whilst companies have had to scale back their investment plans and hence their growth, households have seen their purchasing power eroded by the impact of taxation on the general level of final consumer prices. In macroeconomic terms, the Cameroonian economy posted estimated real growth of 3.6 per cent, which was 1.3 points below the level projected in the PRSP and 1.4 per cent down on the previous year. At constant prices, sectoral growth was 4.6 per cent for the primary sector, 0.7 per cent for the secondary sector and 5.3 per cent for the tertiary sector. These figures nevertheless mask diverging trends at the subsector level.

Non-oil receipts have declined by one percentage point of GDP, however. This was the result mainly of the decline in receipts from income taxes on natural persons, VAT and other taxes and charges on goods and services. There has also been a slight downturn in oil receipts for this period owing to reduced oil output and a bigger price discount on heavy Cameroonian crude. Expenditure was down 1.8 percentage points of GDP. The overall balance, on a cash basis (including gifts), declined by 1.3 per cent of GDP.

As pertains to the utilisation of the budget savings generated by debt remission, the Government has continued its endeavours to improve the absorption of such credits.

Lastly, after reaching the completion point in April 2006, the country began to benefit from numerous bilateral and multilateral debt remissions.

2.1.3. Political environment and governance

Cameroon is a full member of the African Union, the Central African Economic and Monetary Community (CEMAC), the Economic Community of Central African States, the Arab League, the Commonwealth and *la Francophonie*.

In the 1990s, the country began the move towards the democratisation of political and social life. The new 1996 constitution enshrines the principle of decentralizing the State apparatus and development structures with the aim of transferring territorial and staff authority from the central government to decentralised territorial entities.

As regards the protection of human rights and civil liberties, the trend has been positive (abolition of the law of exception, a multi-party system, press freedom, etc.). The Convention on the Elimination of All Forms of Discrimination against Women, the African Charter on the Rights and Welfare of the Child and the Convention on the Rights of the Child have all been ratified by the Government.

Despite being active, civil society is still too disorganized for its contribution to the country's socio-economic advancement to be visible. The media (radio and television and the press), on the other hand, is firmly on the rise thanks to the liberalization that has taken place in that sector.

The government is now stepping up its efforts to strengthen the rule of law, the judicial system, to improve governance and to further the decentralisation process.

2.2. HEALTH SECTOR ANALYSIS

Health development activities in Cameroon are guided by the Health Sector Strategy, which is in turn inspired by the Millennium Development Goals (MDGs), and the Government's poverty reduction strategy. The Health Sector Strategy is Cameroon's global response to the major

challenges of reducing maternal and infanto-juvenile morbidity/mortality due to vaccine-preventable diseases, dealing with epidemics, emerging and re-emerging diseases, epidemiological transition and the urgency of ensuring effective protection of the public good that is the health of the population.

The Health Sector Strategy is therefore a vision for the future, a comprehensive programme of reforms that proposes solutions for the shortcomings of the sector and lays the groundwork for targeted and resolute action to attain the millennium development goals in a concrete and measurable manner.

The main lines of the Health Sector Strategy are being developed in four key areas, namely:
- the healthcare delivery master plan;
- organising the sector based on viable health districts;
- the management and administrative process;
- the technical aspects, in line with the millennium development goals.

The implementation of the strategies in these areas is designed to promote rapidly improved access to healthcare for our peoples and speed up the attainment of the millennium development goals.

2.2.1. Organisation and functioning of the health system

Cameroon's health system is based on the three-tier African health development scenario. The three tiers may be represented by a pyramid on three levels, each of which is comprised of elements that help implement the national health strategy:
- at the base of the health pyramid is the peripheral level, made up of 173 health districts and representing the operational level; each district is subdivided into health zones, each of which is served by one or several health entities (the country has 173 district hospitals, 97 arrondissement medical centres, 1,570 public health centres and 470 and denominational private health centres);
- at the centre, the intermediate level is made up of 10 provincial public health delegations and nine provincial and similar hospitals, and provides technical support to the operational level;
- at the apex of the pyramid is the central level, comprising services and other central structures of the Ministry of Public Health and seven national hospitals; it is responsible for formulating strategies to implement health policies as determined by the Head of State.

There are structures for dialogue at each level of the pyramid. At district level we therefore find district health committees (COSADI), which emanate from the health zone committees (COSA); at the intermediate and central levels are, respectively, the Special Fund for Health Promotion (FSPS), which emanates from the COSADI, and the National Health, Hygiene and Social Affairs Board, created by Decree No. 76-450 of 8 October 1976.

Each level of the national health system is assigned primary missions with precise functions. Administrative, technical and community structures have been developed to accomplish these missions and discharge the functions.

The three support components and the five immunization operations are integrated into the minimum health and services package delivered by all health entities and health services at the various levels of the health pyramid.

2.2.2. Health financing

By and large, the health sector is funded by households (recovery of costs and other direct payments), as well as by the State budget, external financing, and to a lesser degree, local government authorities and private health insurance schemes. In 1996, of an estimated CFAF 173 billion in total funding provided to the sector, the share of households was 73 per cent[4], as against 11 per cent for the State and 7 per cent for external partners.

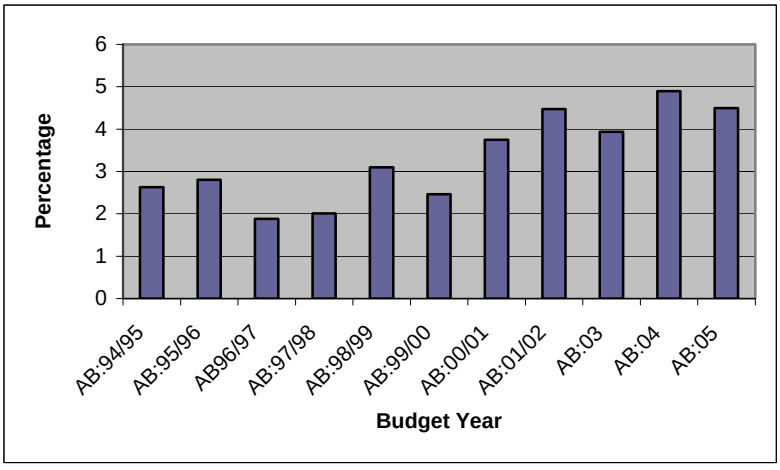
The proportion of the State budget allocated to health remains low (under 5 per cent, see Table 1) by comparison with the health sector policy declaration of 1992, which foresaw a gradual increase up to 10 per cent of the State budget, in recognition of the priority accorded to the health sector in line with WHO recommendations in that regard. It must be noted, however, that this priority is clearly reflected by the allocation of the additional funds, in particular under the HIPC and the C2D.

Table 1: Evolution of Ministry of Public Health budget by comparison with overall State budget from 1994 to 2004

Years	Projected			Executed					
	Evolution of allocated budget (in USD)			Evolution budget executed (in USD)			% Execution/		USD value used
	National	MPH	% / Budget national	National	MPH	% / Budget national	National	MPH	
1994-1995	$1'365'821'095	$35'953'939	**2.63%**	$1'054'634'485.83	$31'394'647.06	**2.98%**	**77.22%**	**87.32%**	***499.330***
1995-1996	$1'272'251'309	$35'639'397	**2.80%**	$1'210'471'481.48	$31'905'434.32	**2.64%**	**95.14%**	**89.52%**	***509.330***
1996-1997	$1'860'786'857	$35'015'997	**1.88%**	$1'494'000'453.92	$40'044'799.15	**2.68%**	**80.29%**	**114.36%**	***578.250***
1997-1998	$2'119'308'600	$42'701'518	**2.01%**	$1'758'042'420.41	$44'499'446.66	**2.53%**	**82.95%**	**104.21%**	***593.000***
1998-1999	$2'005'342'962	$62'115'091	**3.10%**	$1'780'064'490.52	$49'264'921.96	**2.77%**	**88.77%**	**79.31%**	***613.360***
1999-2000	$1'831'360'782	$45'088'318	**2.46%**	$1'685'308'797.34	$43'413'486.68	**2.58%**	**92.02%**	**96.29%**	***708.560***
2000-2001	$2'015'252'980	$75'528'296	**3.75%**	$1'694'694'953.70	$47'609'341.06	**2.81%**	**84.09%**	**63.04%**	***732.410***
2001-2002	$2'200'564'740	$98'472'513	**4.47%**	$1'975'177'374.91	$73'448'612.99	**3.72%**	**89.76%**	**74.59%**	***702.090***
2003	$2'567'951'153	$101'155'833	**3.94%**	$2'345'380'458.18	$70'352'101.90	**3.00%**	**91.33%**	**69.55%**	***587.620***
2004	$2 940 000 000	$ 144 152 712	4.90%	$2 639 878 263	$84 515 708		**89.79%**	**61%**	***550.000***
2005	$3 129 091 000	$153 658 182	4.52%						550'000

Source : Finance Acts of the Republic of Cameroon.

Chart 1: Evolution of Ministry of Public Health budget by comparison with overall State budget



To supplement the support provided by traditional partners, the country began to seek new sources of financing. Consequently, in addition to the abovementioned HIPC funds, which go towards

[4] Ntangsi Joseph, An analysis of health sector expenditure in Cameroon using a national health account framework, 1996, P.

priority health programmes, the country is receiving support from GAVI and from the Global Fund to fight Tuberculosis, Aids and Malaria.

There is now the political will to decentralize and devolve resource management from the central level, as reflected in the increasing autonomy being enjoyed by the various Ministry of Public Health priority programmes, although the services remain integrated at the operational level.

Generally speaking, the share of the Ministry of Health in the national budget has been evolving by fits and starts for several years, and at no time reached 5 per cent during the 1994-2003 period (see Table 1 above). Since the 2000-2001 fiscal year, the Government has made clear its resolve to increase the budget allocated to the health sector. The execution of that budget still needs to be improved, however. The figures in Table 1 above do not reflect the part played by Government through related sectors (defence/police, the prison administration, social affairs, national education, higher education, decentralized local authorities, etc.)

2.2.3 Major health problems

The population continues to be affected by major health problems in the form of endemoepidemics, non-transmissible diseases, emerging and re-emerging diseases and problems associated with the operational shortcomings of the health system.

The endemoepidemics are being favoured by Cameroon's geographical location in the central African sub-region. This gives rise to a preponderance of certain diseases:

- malaria is still the leading cause of consultations at the health entities (45-50 per cent). Some 23 per cent of hospitalisations, and 35 per cent of deaths of children below five years are attributable to malaria. The average morbidity rate is 42.1 per cent amongst children under five years, 33.6 per cent amongst pregnant women, and 31.8 per cent amongst children over five years. It absorbs 40 per cent of annual household health budgets[5]:
- there are recurrent meningitis epidemics in the northern region of the country;
- cholera is endemic, with recurrent epidemics;
- diarrhoea-related ailments and acute respiratory diseases are still amongst the principal causes of morbidity and mortality in children of less than five years;
- other parasitic diseases (trypanosomiasis, filariosis, intestinal parasitic infections, schistosomiasis, etc.);
- HIV, AIDS (the prevalence rate was 0.5 per cent in 1987[6], in 2004; it was 5.5 per cent for the population aged 15 to 49, according to EDSC III);
- Non-transmissible diseases such as arterial hypertension and diabetes, and oncological diseases, which are leading to higher morbidity and mortality rates;
- poliomyelitis, measles, yellow fever, of which there is still high risk of transmission despite the accelerated efforts to combat these diseases in recent years.

Main problems associated with the performance of the health system:

- de-motivation of health personnel and the brain drain effect.
- shortage of health personnel in appropriate quality and quantity.
- low rate of absorption of existing financing.
- rigidity of procedures for the disbursement of State funds.
- inefficient mechanisms for coordination/steering of the sector.
- fragmentation of activities carried out by the partners within the country.

[5] National Anti-Malaria Programme
[6] OCEAC Survey

The main health indicators have therefore not improved significantly despite the implementation of economic reforms and good governance. These indicators may be subdivided into two categories:

Indicators pertaining to the state of health:

- High levels of infant mortality (74‰)[7] and infanto-juvenile mortality (144‰)
- The high rate of chronic malnutrition among children of less than five years (32 per cent), of which 13 per cent severely, and chronic malnutrition of 10 per cent amongst women of child-bearing age;
- The high level of maternal mortality (669 deaths per 100 000 live births in 2004).

Health determinants:

- insufficient access to drinking water (63.2 per cent in 2004), drainage and decent living conditions;
- growing impoverishment of a significant swathe of the population (40.2 per cent of the population has less than a dollar a day);
- illiteracy in the population at large (35 per cent amongst women versus 18 per cent for men).

2.2.4. The Government's health priorities

Health sector reform and the fight against disease are amongst the Government's priorities under its Poverty Reduction Strategy, which aims to halve the level of poverty in Cameroon by 2015. To that end, HIPC debt forgiveness made it possible to recruit 1,200 health operatives in 2002 and a further 600 in 2004. In addition, measures have been taken to improve the working conditions for health staff. Furthermore, the Government intends over the next few years to:

- press ahead with health sector reform (restructuring of priority programmes, hospital reform, development of health risk sharing through health insurance and mutual schemes);
- make health services more accessible to all social strata by ensuring that 90 per cent of the population is no further than one hour's walking distance from a health centre providing the minimum healthcare package;
- make possible the achievement of the Millennium Development Goals in regard to health in general and the reduction of child and maternal mortality in particular;
- step up the fight against emerging and re-emerging diseases;
- step up the fight against non-transmissible diseases .

The EPI expects these reforms to improve the integration of its activities into basic health services to make them sustainable and bring about reduced vaccine wastage rates as well as a lasting expansion of immunization coverage so as to lower morbidity and mortality attributable to EPI target diseases.

[7] EDSC III, 2004

2.3. ANALYSIS OF THE EPI :

2.3.1. International context

The meeting of the World Health Organization held in Geneva in May 2005 adopted the document entitled "Global Immunization: Vision and Strategy 2006-2015". This document, better known as GIVS, insists on the establishment of strong links between vaccination and the other forms of health action, and examines the need to surmount the systemic barriers which surround vaccination and affect the entire health sector. This global vision, linked to the strategic plan for the expanded immunization programme for 2006-2009, is aimed at improving the performance of national vaccination programmes in order to provide reinforcement for national health systems, and all contributing to the achievement of the Millennium Objectives for Development (and in particular MOD-4).

Analysis of the situation from the international context

Vaccination coverage at DTP3 in the African region, adopted as a performance indicator of vaccination programmes, rose from 54 % in 1965 to 69 % in 2005. This improvement, however, conceals certain disparities in vaccination cover at the national and infra-national level.

Among the factors which have contributed to the improvement in vaccination coverage is the implementation of the approach based on the coverage of all districts (RED); the reinforcement of human resources; the improvement in the management of vaccines; the increase in credits destined for vaccination; and improvement in access to health services.

The number of countries in which poliomyelitis is endemic dropped from 11 in 2000 to one single country at the end of 2005. In 2005 likewise, mortality due to measles was down by 60 % in comparison with 1999. At the end of 2005, 16 countries in the African region attested to the elimination of neonatal tetanus. The number of countries subscribing to anti-yellow fever vaccination in their systematic vaccination programmes grew from 9 in 2000 to 23 in 2005. While n 2000 there were only 6 countries offering vaccination against hepatitis B in their national programmes, there were 28 at the end of 2005. By contrast, only 8 countries had adopted the anti-*Haemophilus influenzae* type b vaccine by the end of 2005.

With regard to the safety of injections, the number of countries making recourse to self-blocking syringes grew from one single one in 2000 to 37 in 2004.

Since 2001, in 19 countries anti-measles vaccination campaigns have served as platforms for the integration of other actions aimed at improving infant survival, such as the distribution of vitamin A and of mosquito nets impregnated with insecticide and worm powder. The integration of other actions should not be limited simply to campaigns of mass vaccination. The countries are exploring ways and means to integrate these actions into routine vaccination services.

A number of lessons have been learned in the course of the implementation of the regional strategic plan for the EPI 2001-2005. Among the crucial factors for success may be cited:

- The need for firm political commitment in favour of the programme and its adoption
- The importance of micro-planning at the district level, with the participation of the communities;
- Ongoing training of health personnel by appropriate supervision and perfecting of their performance;
- The need to put in place effective follow-up systems, based on the district.

Despite the progress made in the course of the 2001-2005 period, national vaccination programmes conducted in the region are still encountering numerous difficulties, the most important of which is the lack of access to good quality vaccination services due to the frequent breakdowns in stocks, shortage of personnel and materials in health training, shortcomings in the vaccination safety plan, etc.

The adoption of more elaborate vaccines and injection techniques has rendered the long-term financing of vaccination still more difficult. Among the obstacles which affect the whole of the health sector may be cited insufficient political commitment and inadequate financing, shortage of correctly trained personnel, and inefficient management of the programmes.

Regional vaccination objectives

General objective for the African region

The general objective of the regional strategic plan for the 206-2009 period is to avoid mortality, morbidity, and disability due to diseases which can be avoided by vaccination.

Specific objectives

The specific objectives of the regional strategic plan for the Expanded Programme on Immunization 2006-2009 are the following :

- To strengthen the vaccination programmes centred on the district, in order to improve access and recourse to vaccination services;
- To speed up the efforts to eradicate poliomyelitis, get a firm grip on measles, the elimination of neonatal tetanus, and the fight against yellow fever, by reinforcing routine vaccination procedures and supplementary vaccination activities, and by the monitoring of illnesses on a case-by-case basis, with laboratory confirmation;
- To promote innovations, in particular in matters of vaccine research, and to maintain progress towards the adoption of new or under-used vaccines;
- To improve vaccine mangement;
- To improve vaccination safety ;
- To systematise access to integrated services and to maximise the advantages for the mothers and children participating in vaccination sessions;
- To provide the countries with support in order to allow them to maintain the acquisition of vaccination cover permanently.

Targets for the regional plan

From now to the end of 2009 :

- At least 80 % of the countries will attain a coverage rate of 90 % for DTC3 at the national level;
- At least 80 % of the countries will attain a coverage rate of 80 % for DTC3 in all the districts;
- There will no longer be any wild polio virus in circulation associated with acute flaccid paralysis;
- Death due to measles should be reduced by at least 90 % in relation to the 1999 estimates (reduction in the estimated number of deaths due to measles from 519,000 to less than 52,000 per year);
- At least 80 % of the countries will have eliminated maternal and neonatal tetanus;

- In all the countries exposed to risk, systematic anti-yellow fever vaccination will have attained a coverage rate of at least 80 %;
- All the countries will have integrated vaccine against hepatitis B in their national vaccination programmes;
- At least 80 % of the countries will have introduced the anti-*Haemophilus influenzae* type b vaccine into their national vaccination programmes;
- All the countries will have adopted self-blocking syringes or equally safe injection techniques;
- At least 80 % of the countries will have associated vaccination with other means of action in favour of child survival, such as vitamin A supplements, the distribution of mosquito nets impregnated with insecticide, parasite elimination, and other courses of action.

Guiding principles for the regional strategic plan

Deployment :
In its application, the regional strategic plan for the Expanded Programme on Immunization 2006-2009 will be focussing on the major priorities defined in the *Strategic guidelines for action by the WHO in the African region 2005-2009*[9] and the document entitled: "Global immunization: Vision and strategy".

Partnership arrangements :
The experience gained in regional and worldwide co-operation in matters relating to vaccination is an inducement to the expansion of partnership arrangements. Those partnership arrangements which already exist at the national level (inter-institutional co-ordination committees, for example) will be strengthened and developed at district level.

Coverage of all districts :
Planning and management of district health teams will be boosted by the implementation of operational elements using the approach based on the coverage of all districts.

Monitoring :
Technical monitoring of the implementation of the programmes will continue to be assured by independent committees operating under the authority of the special Group on Vaccination in Africa.

Priority regional actions

In order to maximise access to vaccination, it will be essential to extend the approach based on the coverage of all districts (RED)[10]. To this end, it will be necessary to involve health training personnel more closely with the micro-planning at district level, as well as strengthening supervision, partnership arrangements, and the mobilisation of resources.

It will also be necessary to enhance the capacities available, to improve community participation in order to maintain the demand for vaccination, to promote efficient vaccine and logistics management, and to guarantee sufficient and long-term financing.

It will be necessary to make recourse to supplementary vaccination activities, monitoring on a case-by-case basis, to respond to epidemics promptly, and to cover the whole of the districts, in order to speed up the action initiated against the disease.

The capacities of the Member States to organize vaccine trials and to link the factual situations with support for the decisions bearing on the adoption of new vaccines, to plead in favour of a sufficient provision of technologies and new vaccines, and long-term financing of innovations in relation to vaccination, will be reinforced. Priority will likewise be given to community information and supporting the registration of records by civil registries.

Good vaccine and vaccine safety management will be guaranteed by strengthening the capacities of the national regulatory authorities, by developing a vaccination policy, by implementing injection safety policies, and the monitoring of undesirable side-effects associated .with vaccines.

Other actions in favour of child survival will be integrated with vaccination, by assisting the countries to adapt the framework of regional integration and by deploying the best possible practices, guidelines, and integration instruments based on primary health care.

The principal costs elements in the strategic plan will be: The vaccines (34 %), the enhancement of vaccination systems (56 %), and vaccination campaigns (10 %).

Roles and responsibilities

It will be appropriate for the countries:

- To prepare multi-annual and complete vaccination plans;
- To give priority to co-operation and multi-sector partnership arrangements;
- To give priority to the recruitment, training, and commitment of health personnel;
- To increase the financial resources committed to vaccination;
- To scrutinise and update the policies and guidelines applicable to vaccination..

The WHO and its partners will help the countries:

- To plead their cause with the persons responsible for policy and international partners ;
- To provide technical, financial, and material support for the priority activities;
- To consolidate co-ordination and partnership arrangements;
- To continue to ensure leadership and give the impulse necessary in the EPI sector;
- To ensure long-term acquisition of coverage by the EPI.

Conclusion

While it is true that the performance of the national vaccination programmes may have improved considerably in the African region in the course of the 2001-2005 period, in net terms a higher number of children will have to be vaccinated if the regional and global targets agreed are to be achieved.

2.3.2. National context of the Cameroon EPI

In Cameroon, the Ministry of Public Health adopted the Extended Programme on Immunization (EPI) as a pilot project in 1976. This project was supported by the Organisation for Coordination of the Control of Endemic Diseases in Central Africa (OCEAC) as well as the Centers for Disease Control (CDC), Atlanta. In 1982 the Government decided to extend the activities of the EPI over the whole of the country and to turn it into a national programme. In 1993 the vaccination activities were integrated into the minimum package of activities of the Health Centre; since then, all health units in Cameroon must provide vaccination.

On the institutional level, the EPI has always been considered as a priority programme, and vaccination coverage as an indicator of the viability of the health system, and it has also served as a trigger indicator of the point of achievement of the Highly Indebted Poor Countries (HIPC) initiative. It is this which accounts for its importance in the health sector strategy which defined clearly the objectives and strategies for the period 2001-2005, put into effect by way of the multi-annual plan for the same period.

At the end of the implementation of this plan, an overall review of the EPI, linked with a national survey of vaccine coverage, was carried out at the end of 2005 in order to ascertain the situation with regard to the programme.

2.3.3. Making use of the results from the EPI 2005 review

The review was conducted on the basis of the three support components and the five operations of a vaccination system, while integrating the analysis data from the quantitative review (vaccination coverage survey).

The review likewise related to the integration of the EPI into the whole body of health service activities at different levels.

2.3.3.1. EPI support components

2.3.3.1.1. Management of the programme

- Institutional aspects

The EPI was restructured in 2002 with the creation at the central level of the Central Technical Group (CTG/EPI), consisting of a permanent secretariat and six (6) sections ; provincial and district EPI units have likewise been created at a decentralised level.

It can at present be seen that the Central Technical Group is operating in an efficient manner, thanks in particular to the strengthening of personnel and personnel capacities, as well as the progressive improvement in the executive and in working conditions. The programme is benefiting from technical support from development partners, in particular the WHO and UNICEF.

At the provincial level, all ten (10) of the EPI units are operational, and the principal persons responsible are in place, but these provincial EPI units are still confronted by the problems of insufficient personnel and lack of technical and utilisation equipment. By contrast, it has been found that few of the EPI units are operational at the health district level. 58 % are not operational, most often due to insufficient personnel. The fact that health records are not fully under control makes it more difficult for the EPI units to operate at district level. At the level or health areas, the spatial dispersal of personnel has not been uniform.

Still with regard to the matter of institutional reinforcement for the EPI, note may be taken of the involvement of personnel training schools with the vaccination activities and operational research, the existence of special committees for monitoring polio, the growing interest in vaccination activities by the NGO (Non-Governmental Organizations), the associations, and civil society.

The time allocated to training for the EPI remains very insufficient, which has led the Government to introduce the process of review of the EPI training curriculum for medical and paramedical colleges, based on prototypes of curricula prepared in collaboration with the development partners.

While it is true that the national immunization policy document is still in the course of preparation, the EPI does have available a document of norms and standards in matters of vaccination, and a document relating to National Strategy with regard to the Safety of Injections. These two documents have been widely distributed at all levels. The surveys showed that 90 % of the DPSP (Prefectoral Health Delegations) have the two documents at their disposal, close on 95 % of the District Health Services have the national strategy document relating to the safety of injections available, and the Norms and Standards, as well as the Norms and Standards document, are to be found in 85 % of the health areas.

It may also be noted that the policy and strategy documents for other programmes integrating EPI activities (RS, HIV and AIDS, onchocerosis, tuberculosis, etc.) are available in more than half of the DPSP and health districts.

- Planning

With regard to planning, a strategic plan for 2001-2005 exists at the central level, which has been implemented by way of annual operational plans, these being evaluated at the end of each period.

Outside the multi-annual plan, other specific plans have been prepared on the basis of studies and surveys conducted in the course of the 2001-2005 period, then inserted into the annual plans. This involves in particular plans relating to the safety of injections (2003), to the monitoring of the EPI target diseases (2003), to training (2004), to logistics (2004), and to the provision of vaccines and quality assurance (2005).

All these different plans are put into effect by CTG-EPI in collaboration with the partners and validated by the Inter-Agency Coordination Committee (ICC).

In 9 provinces out of 10, the EPI provincial unit has a specific EPI 2005 plan of action. Only four (04) provinces have an integrated and budgeted plan of action which includes the EPI. It may likewise be noted that there is low participation by different participants in the preparation of plans of action, and only one province has been able to have its plan validated by the competent authority.

At the operational level, a little over a half of the health districts prepared an EPI plan of action in 1994 (66.7 %), which was improved in 2005 (83.3 %). However, this EPI plan is only integrated into the plan of action of the health district in 64 % of the operational health districts (VC >70 %) and33 % in non-operational health districts (VC<70%).

The EPI plan of action is prepared by the CSSD, in 95 % of case in collaboration with the DCT (District Cadre Team), and in 77 % of cases in collaboration with the COSADI. The DPSP and other bodies involved only participate in 50 % of cases; the different plans are only validated by the local authority concerned in 55 % of cases.

In the health areas, planning for EPI activities was carried out in 44 % of cases in 2004 and in 50 % of cases in 2005. In 33 % of the health areas, the area health committees (COSA) were involved in the preparation of the activities plan, and other partners participated in 21 %, notably the local associations taking part in EPI activities. These plans have only been validated by COSADI for 23% of the health areas.

- Coordination

At the central level, within the framework of the implementation of the EPI, there is a functional co-ordination structure, created in August 2002, the Inter-Agency Coordination Committee (ICC), which covers the Ministry of Public Health and its various different partners.

Nevertheless, it should be noted that coordination between the different directorates of the Ministry of Public Health is still not satisfactory with regard in particular to the needs of monitoring and management of epidemics.

At the provincial level, there is no regulatory framework for the coordination of EPI activities. Three (03) DPSP out of ten (10) have implemented an informal body for the coordination of EPI activities similar to the ICC, and in five (05) out of ten (10) there are structures of various types, which serve as the framework for coordination of EPI activities as the need arises.

88% of the health districts have a District Health Committee (COSADI) which serves as a framework for harmonization and coordination of health activities. 81 % of these COSADI are operational, and 38 % legalised. In the areas where the COSADI are not operational, the reason often given in the lack of financing (4%), the failure to hold meetings (4%), and interference with other activities. The health districts with an operational COSADI are relatively higher performers (65%) in the EPI sector.

In the health areas, the Health Committees which exist in 87% of cases serve to provide the framework of coordination for health activities. This involves structures which in general are operational (84%) but which are not yet all legalised (20%). The performance is higher in the health areas of which the health committee has legalised statutes (78%).

- System of motivation

- ***Description of the item and the tasks***

The description of the items is clear and precise at the central level (organic text of the CTG-EPI). but does not exist in the non-concentrated EPI units.

**** Initiatory measures***

At the central level, it may be noted that there has been reinforcement of CTG-EPI personnel, while the acquisition of new working material (mobile material, IT hardware, office equipment, etc.), access to the Internet, and the refurbishment of buildings, as well as other premises still require improvement.

On the financial level, the organizational document of the CTG-EPI makes provision for personnel bonuses, but the amount of these bonuses and the frequency of their allocation are not defined. Nevertheless, financial bonuses are granted to personnel in a regular manner.

Other forms of motivation are likewise applied in recognition of the qualities of the personnel (honorific distinctions, professional promotions, etc.).

At the provincial level, the incentive measures most frequently applied are:

- Improvement of working conditions (assignment of IT hardware and mobile equipment, refurbishment and equipment of offices, etc.);
- Assignement of financial bonuses ;
- Strengthening of capacities (ongoing training, supervisions)

It may also be noted that the deconcentration of financial management has been put into effect by the opening of EPI bank accounts in each province, which constitutes a form of assignment of responsibility

In 95.8 % of the health districts and 84.6 % of the health areas different forms of personnel motivation are to be encountered, those most frequently applied being:

- Good working conditions (vehicles, motorcycles, fuel, office equipment, IT equipment, etc.)
- Benefit of certain financial advantages (indemnities, local bonuses, etc.).

The great majority of the health districts recognise that they do not have means of motivation for the administration sector.

The District Health Services which recognise the benefits of motivating conditions (accommodation, vehicles, indemnities, bonuses) are in the majority of cases also the best performers. At the level of the health areas, the existence or otherwise of any form of motivation as referred to above does not seem to influence performance. This paradoxical situation requires the investigation of other motivation factors (supervision, training, etc .).

In general terms and at all levels, apart from certain indemnities and other financial advantages provided for by specific regulations, other forms of financial motivation are not based on ay regulatory provisions. While recognising the efforts made to motivate them, the personnel themselves still consider the incentive measures to be insufficient, in particular with regard to administrative motivation (honorific distinctions, professional promotions, application of a career plan, etc.).

2.3.3.1.2. Financing EPI activities

Within the framework of the implementation of the Multi-year Plan 2001-2005, the EPI has prepared a Financial Viability Plan which has allowed for an evaluation of its costs from 2001 to 2003 and to project these over the next ten (10) years. This document today constitutes a dynamic tool for putting the case for seeking additional financing in favour of the EPI at all levels.

- Development of the financing of the EPI

The EPI has always been considered as a priority programme by the Ministry of Public Health. The budget allocated to the EPI for financing its activities has undergone a development of ups and downs in the course of the years 2000 to 2003, whether this relates to funds from the State itself or contributions from partner member organizations of the Inter-Agency Coordination Committee (ICC).

Table N° 2 Contribution from the Government to the financing of the programme from 2000 to 2005

Exercice	Budget de fonctionnement	Budget d'investissement		Fonds PPTE	Sous-total financements internes hors PPTE	Sous-total financements internes	Total général
		Ressources internes	Dons				
2000 / 2001	$ 1,175,163.11	$ 831,067.96	$ 388,349.51	$ 2,622,912.62	$ 2,006,231.07	$ 4,629,143.69	$ 5,017,493.2
2001 / 2002	$ 1,762,745.63	$ 500,343.69	$ 388,349.51	$ 2,104,077.67	$ 2,263,089.32	$ 4,367,166.99	$ 4,755,516.5
2003	$ 539,805.83	$ 291,262.14	-	$3,969,800.00	$ 831,067.97	$ 4,800,867.97	$ 4,800,867.97
2004	$232,501.22	$305,922.66	-	$2,255,461.07	$ 538,423.89	$ 2,793,884.96	$ 2,793,884.96
2005	$169,091.00	$318 182	-	$3,399,827.00	$ 487,273.	$ 3,887,100.	$ 3,887,100.

***Source* : Finance laws of Cameroon and Activity Reports for 2001, 2002, 2003 and 2004**

It can be seen that there was a fall in national budget contributions to the financing of the EPI during the period 2000-2005. This reduction can be explained on the one hand by the financing of other programmes which have been created since 2002 and, on the other, by the difficulty in effectively mobilising the credits allocated.

Table N°3: Contribution from partners to the financing of the programme from 2000 to 2005 (in $US).

Rubrique / Annee	OMS	UNICEF	GAVI	GTZ	JICA	UE	ROTARY	TOTAL
2000	612 868	479 939	0	0	696 311	0	0	1 789 118
2001	1 270 053	2 390 970	553 500	0	696 311	0	23 301	4 934 134
2002	2 681 767	4 572 545	553 500	11 650	696 311	0	155 340	8 671 113
2003	375 000	1 725 314	1 003 500	12 174	503 311	128 510	139 130	3 886 939
2004	1 683 035	2 734 152	2 588 860	-				7 006 047
2005	2 794 461	3 862 004	4 449 189	30000			100000	11 235 654

Source : Financial reports from the partners for 2000, 2001, 2002, 2003, 2004 and 2005

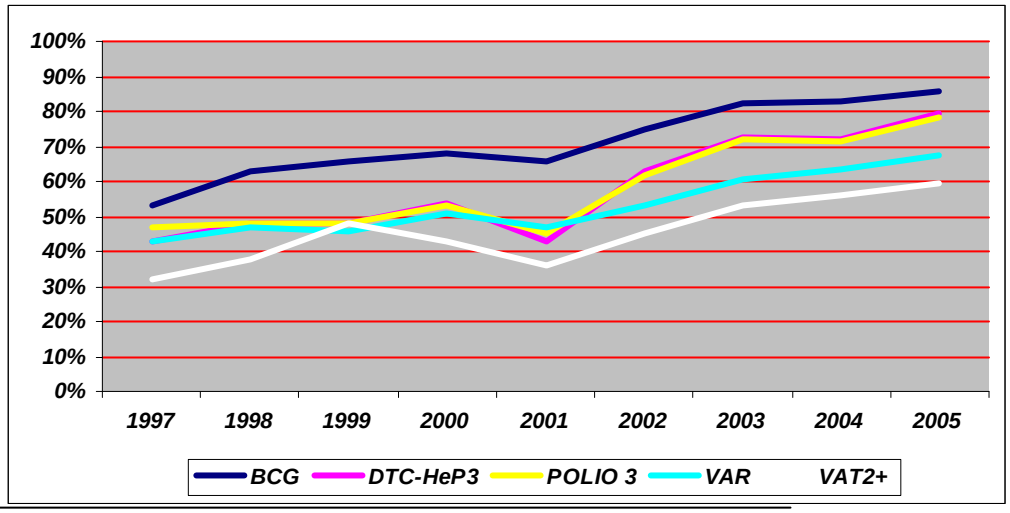
It can be seen that there has been a progressive increase in the contributions from the partners to the EPI, rising from 1.7 million US$ in 2000 to 11.2 million US$ in 2005. The substantial support from GAVI should be noted towards supporting the strengthening of vaccination services, the safety of injections by the supply of injection material from 2003 to 2005, the supply of anti-yellow fever vaccine in the EPI since its introduction in 2004, and tetravalent vaccine against viral hepatitis B since 2005.

Conclusion

After a long period of stagnation in vaccine coverage, due in large part to the weak management of the programme and insufficient financing from the State, the restructuring of the EPI imposed in 2002 has allowed for an improvement in its capacities for action.

Vaccination coverage was raised to 72.6 % in 2003 with regard to DTC3, so allowing for the release indicator to be reached for the achievement point of the HIPC initiative with regard to vaccination, then to 79.7 % in 2005. These results have been obtained thanks to the commitment of the State, the action of the Government, to the reforms, and to the resources which have been mobilised.

Graph N°2 : Development of the rate of Vaccination Coverage in Cameroon from 1997-2005



With regard to the epidemiological monitoring of the target illnesses, this has been strengthened and it is now possible to detect new imported cases of wild polio virus..

Table N°4 : **Performance development in epidemiological monitoring of target diseases by the EPI in Cameroon from 1997 to 2005**

MALADIES	1997	1998		1999		2000		2001		2002		2003		2004		2005	
	cas	cas	D	cas	D	cas	D	cas	D	cas	D	cas	D	cas	D	cas	D
PFA/polio	21	40	-	95 (1*)	-	151	-	166	-	101	-	142 (2*)	0	219 (13*)	2	261 (1*)	4
TMN	173	197	ND	238	105	207	94	279	59	256	134	159	62	145	60	139	63
Rougeole	7210	10731	311	1089	248	14623	352	23691	258	1448 (220*)	37	899 (232*)	17	1038 (**358***)	25	1328 (528 *)	29
Fièvre Jaune	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	126 (2*)	0	434 **(1*)**	5	829 (2*)	12

** confirmed case* *ND = Not available* *D = death*

Nevertheless, there are some signs of quality shortcomings, such as have been shown by a certain number of studies conducted from 2003 to 2005 with the support of the development partners, among others:

- Analysis of the training requirements of the EPI;
- Evaluation of the safety of injections;
- Evaluation of the logistics
- External review of the epidemiological monitoring of the target diseases;
- Evaluation of the system of vaccine supply;
- Global review of the EPI 2005 ;
- National enquiry 2005.

- Development of financing of vaccines by the Government

Since 2002 the EPI has undergone an overall advance towards the initiative of "Vaccine Independence". Within this framework, since 2001-2002 the Government has created a budget allocation dedicated exclusively to the purchase of vaccines, consumables, and the mastery of procedures for acquisition of these vaccines. In effect, the State purchases all the EPI vaccines as a matter of routine via the National Centre for the Purchase of Essential Mediations and Medical Consumables (CENAME).

However, since 2004 the State has solicited the support of fund donors for the purchase of the new vaccines introduced into the EPI (yellow fever, viral hepatitis B in the form of tetravalent vaccine). This commitment by the State to vaccine independence has been integrated into the financial viability plan for the period 2004-2013, endorsed by the Government and their partners. This pan makes provision for the financing by the State to come progressively to replace outside support in order to achieve vaccination independence again in 2013.

The budget allocated to this programme by the State to finance its activities (vaccination) has multiplied by 1.5 between 2002 and 2004, increasing from US$ 935 721.93 in 2002 to US$ 1 414 796.26 in 2004. This financing relates essentially to the eight (8) principal vaccines covered by the programme (BCG, DTC, VAR, VAA, VAT, hepatitis B, VPO, meningitis).

Table N° 5 : Development of quantities and costs of vaccines financed by the Government from 2002 to 2005

Vaccin	2002		2003		2004		2005	
	Quantité (doses)	Coût en $USD	Quantité (doses)	Coût en$ USD	Quantité (doses)	Coût en $ USD	Quantité (doses)	Coût en $
BCG	1 456 000	192 129	1 441 200	145 195	1 200 000	150 391	1 320 000	$154 320
DTC	2 992 010	424 077	0	0	1 322 000	307 097	0	$0
POLIO	1 092 000	171 444	200.000	429 353	4 540 000	715 859	0	$0
VAR	400 000	66 658	843 380	167 921	591 000	150 425	1 860 000	$482 585
VAA	0	0	190 450	28 170	0	0	67 000	$74 712
VAT	1 000 000	81 414	0	0	600 000	69 946	1 850 000	$253 955
MENINGO	0	0	117 500	115 146	0	0	0	$0
Hep B	0	0	19 100	45 957	10 000	21 077	0	$0
TOTAL de COUTS		**935 722**		**931 742**		**1 414 795**		**$965 572**

Source : CENAME 2005

- Financing of vaccination campaigns and integrated plan of action 2004

The review has shown that the financing of integrated plans of action can only cover all the needs with difficulty. With regard to the financing of vaccination campaigns, it is often possible for these to be achieved for all the health districts, but with difficulty in the context of their microplans.

- Sources of financing

In 2004 the integrated EPI plan of action benefited from financing deriving from a variety of sources, these being: The State (regular budget and HIPC resources), the local decentralised collective organizations, and Cameroon's development partners (WHO, GAVI, UNICEF, UNFPA, etc.). The survey has allowed for the principal sources of financing to be identified at the provincial, district, and area health levels.

Apart from the efforts agreed to by the State with a view to achieving vaccination independence and the payment of staff, GAVI still remains the primary source of financing for the integrated EPI plan of action at the provincial level. All the provinces have benefited from the financial support provided by this institution. For their part, 7 out of 10 provinces acknowledge having benefited from additional financial support from the WHO, and 5 out of 10 from UNICEF, while the other partners provide specific support for certain activities within the plan of action in certain health districts of the 9 provinces. It should also be noted that a small contribution is made by decentralised collective bodies and the special provincial fund for the promotion of health.

With regard to the routine EPI, in addition to the Government there are a number of partners which contribute to financing at the health district level, in particular the WHO, UNICEF, Cameroon Plan, local collective bodies, etc. The survey was unable, however, to determine the level of satisfaction of the needs of the plans of action budgeted for at the level of the health district.

It may be recalled at this juncture that overall, whether it be at the provincial or health district level, it was found that in 2004 the State remained the largest contributor to the financing of the consolidated EPI plan of action.

2.3.3.1.3. Reinforcement of capacities

The reinforcement of capacities is presented from the point of view of training and training supervision at all levels.

Training

Following the analysis of the EPI training requirements, a plan has been prepared and implemented by way of the following actions:

- The organization across the national territory of a series of EPI management courses (MLM), these being aimed at the heads of provincial units, executives at the central level, the District Executive Team (ECD) of four provinces in ten;
- The training of vaccination service providers of one province in ten in the norms and standards of the EPI;
- The training of the ECD in the implementation of the RED (Reach Every District) approach;
- The training of the ECD of the ten provinces of the country in the epidemiological monitoring of the EPI target diseases;
- The training of the central and provincial logisticians in the computerised management of vaccines;
- The training of the CTG/EPI personnel in the use of the Internet;
- The starting of the process of revision of the training curricula in the medical and paramedical colleges, using the EPI teaching prototypes.

- Availability of the training plan in the integrated annual plan for 2004

In 2004 46 % of the health districts integrated training activities into their plans of action. The implementation of this plan of action into their training programme was of interest to less than 6 personnel per district concerned.

- Scope of EPI management training

Since 2002, a number of health centres have enrolled their personnel for four principal types of training: 62 % for routine EPI, 52 % for monitoring, 50 % for communications in support of EPI, and 44 % for logistics.

Training supervision

In 2004 three (3) provinces in ten (10), as well as 25 % of the health districts, did not prepare a supervision plan.

In relation to the number of supervision procedures anticipated by the provinces towards the health districts, one single province carried out the four supervision procedures recommended by the standards, eight had at least one, and one province had none at all.

At the health district level, 42 % of the programmed supervisions were carried out.

Whether at the provincial, health district, or health area level, the reasons given to justify the failure to carry out the programmed supervision procedures are:

- Interference with the vaccination campaigns (NID, National Immunization Days, occurrence of an epidemic, etc.) in 29 % of the health districts
- Volume of work in 14% of the HD
- Shortage of financial and logistical resources (lack of vehicle) in 14 % of the HD
- Geographical inaccessibility,
- Non-integration of the programmes in 7% of cases.

2.3.3.2. Operations of the vaccination system

2.3.3.2.1. Provision of services

- Vaccination strategies

The strategy which has been set upon is the most developed vaccination strategy developed by the Health Centres (98 %). In order to popularise the strategy proposed, the EPI Norms and Standards document was revised and distributed in 2002 and then updated in 2005. This document contains directives for the implementation of this strategy. The RED (Reach Every District) approach was applied in 14 health districts in 2002 and in 23 districts in 2003, before being extended to all health districts in 2005.
Close on 73 % of the health centres have a programme for vaccination forays as part of their advanced strategy. 12 % of the health centres make recourse to the mobile strategy.

In 2005, more than half the health centres attained a realisation rate of the advanced strategy greater than or equal to 75 %. Close on 46 % even achieved a realisation rate of 100 %.

Only 17% of the districts conduct vaccination activities in areas not provided with health training or having non-operational health structures.

The principal causes for the advanced and mobile strategies not being realised are, among others : The attitude of the head of the centre (25 %), geographical inaccessibility (25 %), reticence of the population (25 %), absence of vehicles (25 %), vehicle breakdown (25 %).

In relation to the preparation and implementation of the mobile strategy activities, the community participates in this in 54.2 % of the health districts. This involvement of the community covers the sensitisation or mobilisation, the offer of canoes, co-operation with the agents, and dialogue structures.

- Monitoring

In 2003, by way of the implementation of the Reach Every District approach, the monthly monitoring of the activities, with the resolution of problems, has become systematic in the districts chosen (24 districts with low coverage).

Following the mid-term evaluation of the RED approach conducted in 2004, this was extended to all the health districts in 2005.

In the course of the implementation of the 2001-2005 multi-annual plan, two data quality audits (DQA) were carried out in 2001 and 2004.

Taking all these actions into account has led the programme to a certain number of results:

- The bringing into circulation of new vaccination cards;
- The use of registers and tally files in all health training procedures. This has contributed to the improvement of data registration practices: Close on 86 % use the tally system, 96 % the vaccination register, 96 % the monthly EPI report, and 75 % the report/strategy file,
- The system of collecting, archiving, reporting, and monitoring/evaluation of data has been improved. Practically all the health district (91 %) have two monitoring meeting reports. In 96 % of cases, there is a graph for tracking the vaccination coverage of the health district, updated and displayed in the SSD; 92 % of the SSD have identified problems based on the analysis of the tracking graph; 81 % of the health centres calculate the vaccination cover in their operational zones; 66 % have a monthly monitoring curve, updated and displayed. Among the centres which produce monitoring curves, 67 % identify problems based on the analysis of the monitoring graphs and in general take corrective action.
- Close on 64 % of the health centres investigate the loss of overview by way of social mobilisation (28 %), the use of the loss of overview manual (22 %), and the use of the EPI manual (13%).
- 96% of the health districts visited organize monitoring meetings (follow-up)/coordination meetings. The majority of the meetings are monthly (61 %), 26 % are quarterly, and 13 % are bi-monthly.
- Of the 10 provincial public health delegations, 6 organize quarterly coordination meetings, in the course of which the monitoring/tracing of EPI activities are reviewed, and 9 have vaccination coverage graphs, updated and displayed.

The implementation of reliable information feedback mechanisms still remains insufficient, despite being strengthened at all levels and facilitated by IT tools and the use of the Internet..

2.3.3.2.2. Social communication/mobilisation

The contribution by social mobilisation has been analysed on the basis of 3 components: Putting the case, social mobilisation, and communication for behavioural change (CCC).

- Putting the case

The Inter-Agency Coordination Committee (ICC) is in operation, and the meetings are presided over by the Minister of Public Health. A Social Mobilisation Section was created within the organizational structure of the CTG/EPI in 2002. The Section consists of three units, the capacities of which are to be strengthened. It likewise benefits from technical support from the social mobilisation focal points of UNICEF and the WHO. The development of communication for behavioural change is a strategic core element of the multi-annual plan 2001-2005, the logical framework of which does not include any objective relating to putting the case and communication, and no communication indicator features on the list of 21 indicators for follow-up and evaluation of this plan. The behavioural study recommended at the time of the external review in 1999 has not been carried out.

At the level of the Provincial Departments of Public Health (PDPH), there is a provincial focal point for health communication which has not been developed. Certain communicators at the EPI have been assigned to the provincial EPI units, but they have not been trained for the activities of putting the case and communication in respect of EPI. The results of the global EPI review in 2005 show that:

- 8 provinces out of 10 have a communication plan which integrates EPI. In these provinces, only 4 are integrating this communication plan with the provincial plan of action, while the other 4 only have a media plan;

- Only 7 PDPH work in collaboration with the relevant NGO's, associations, and sectors in matters of communication ;
- In the 10 provinces, collaboration relations exist between the PDPH and the media in support of the EPI;
- One single provincial public health delegation out of 10 has prepared a map of the areas with strong reticence with regard to vaccination ;
- Finally, only one province out of 10 has data available with regard to the awareness, attitudes, and practices of the populations with regard to EPI.

At the level of the health districts and health areas:

- No structure has been created responsible for communication, and there are no skills available in the matters of putting the case or social communication. The principal difficulties lie in the low priority attached to the activities of putting the case and communication. 61 % of the health centres do not involve the associations or the NGO's in the promotion of vaccination ;
- Only 33 % are provided with an integral communication plan. In addition to this, 16 health districts integrate communication activities in their plan of activities. These communication activities relate to vaccination campaigns (48 %), epidemiological monitoring (25 %), and routine support for the EPI (13 %);
- 58% of the health districts involve dialogue structures in their communication plan ; likewise, 58% of the health districts involve the local associations and NGO's in the promotion of vaccination ;
- It should be noted, however, that the community leaders and the administrative authorities are not very involved in putting the case for EPI at any levels.

- Social mobilisation

Social mobilisation, earlier limited to NID's (1999 review), has undergone an extension towards routine EPI activities during the 2001-2005 period. To this end may be noted the creation of support media containing information about vaccination, in particular vaccination timetables, the safety of injections, and the fact that the services are free of charge. These supports are displayed at health training sessions or distributed via the written and audiovisual media.

However, certain major factors need to be pointed out:

- There is no functional social mobilisation sub-committee within the ICC..
- There are no clear directives for the different providers in the implementation of putting the case and communication with regard to EPI.
- Only 2 provinces out of 10 have a functional social mobilisation committee on an informal basis;
- In one single province the administrative, religious, political, and traditional authorities are members of this committee. It transpires that this structure is not open to the community, to the affinitive sectors, or to institutional and associative partners;
- 67% of the health districts do not have a functional social mobilisation committee, despite them existing.
- 33% of the health districts do have a focal point for social mobilisation.

- Communication for behavioural change

The extension of this approach in the routine EPI has been provided for, with the aim of establishing permanence with regard to the gains from NID's. It does, however, have its limits:

- 2 provinces out of 10 have organized familiarisation activities during the launch of new vaccines (HepB). These activities relate to radio broadcasts, as well as putting the case for routine EPI, the training of journalists, the production of publicity spots, contractual arrangements, and supervision.
- 62% of the health centres do not involve the local associations and NGO's in the promotion of vaccination
- 33% of families are opposed to the vaccination of children and pregnant women. The principal reasons for this opposition are religious and traditional beliefs;
- 58% of the districts involve dialogue structures in their communication plan, as well as local associations and NGO's in the promotion of vaccination ;
- Only 4 % of the health districts are provided with maps showing areas of resistance to vaccination ;
- Finally, 71 % of health districts take care to apply incentive measures in order for mothers to complete the series of vaccinations for their children.

Despite a number of strategies implemented with a view to acquiring the compliance of the local populations, the results of the 2005 FIC survey show that enormous efforts still have to be made to improve the impact of sensitisation. In fact, among the reasons put forward by the mothers to justify their children not being vaccinated, there are a number which can be attributed to lack of communication. Thus, the majority of mothers state that:

- They were not aware of the necessity for vaccination;
- They had not been informed of the place and time of the vaccination session;
- They did not have confidence in vaccination ;
- They were afraid of secondary side effects;
- They were not aware of the need to take the child to receive the second or third dose of vaccine;
- They had erroneous ideas about the contra-indications.

2.3.3.2.3. Epidemiological monitoring of EPI target diseases

The epidemiological monitoring of the EPI target diseases is carried out actively and passively, but is still not totally integrated into the monitoring of other diseases.

The results of the EPI global review conducted in 2005 show that:

- An external review of monitoring was carried out in 2003
- 83% of the health centres display the standard definitions for the EPI target diseases under monitoring, and keep consultation registers in a correct fashion.
- 71% of the health centres produce weekly reports and 42 % produce investigation forms.
- 31% of the health centres maintain that they have still not been issued with consultation and supervision registers.
- 33% of the health centres only involve the communities (traditional healers community links) for the notification of diseases which are being monitored.
- 88% of the health districts have a person who is responsible for monitoring the EPI target diseases and display the standard definitions for these diseases.
- 25% of the districts do not have a list of monitoring sites and 33 % have not prepared a monthly plan of visits to the monitoring sites.

- 67% of districts keep on file copies of the forms for cases of illness which have been investigated;
- Close on 9 health districts out of 10 are provided with sampling kits for cases of EPI target diseases being monitored;
- 88% of the health districts are provided with notification forms.
- All the provinces have a person who is responsible for monitoring the EPI diseases.
- All the districts classify the districts by priority for the detection of wild polio virus, but there is only a supervision plan for health districts by level of priority in 8 provinces out of 10. Seven (07) provinces have integrated a monitoring element into the training plan.
- All the DPSP have monitoring archives.
- All the provinces are provided with the standard definitions for the EPI target diseases being monitored at the level of the DPSP
- There is a data analysis tool available at the central level, and a uniform acquisition mask at the provincial and district levels.
- There is important support provided by the laboratory of the Cameroon Pasteur Centre and the different committees (National Certification Committee and the National Polio Experts Committee).
- Active monitoring is decentralised at the level of the health district.
- It may also be noted that there is disagreement in the number of cases reported and the case by case monitoring, limited distribution of the MAPE results (no regular bulletin), and response to epidemics is not always effected, if not delayed.

2.3.3.2.4. Logistics

According to the EPI equipment inventory carried out in two phases (2002 and 2004), an equipment refurbishment plan has been prepared for the period 2004-2013.

The problem of maintenance of the refrigeration chain has been specifically pointed out

- 4 provinces out of 10 are provided with non-operational refrigeration chain hardware, and only 2 have a contingency plan.
- 8 provinces out of 10 have a sufficient storage volume for the supply period for routine vaccines.
- The storage volume for routine vaccines is sufficient in all the health districts.
- In 96% of the health districts, the temperature records are available, but in 13 % of the districts they are not properly completed.
- The break in the refrigeration chain is one of the major problems encountered in the conservation of vaccines. This break is due in part to the interruption of the power source (55%) or of breakdown (27%). To take account of this break, only 71% of the districts have put specific measures in place, in particular by the acquisition of an electricity generator, a freezer, or an insulated container, for the transport of the vaccine to the provincial public health facility or the adjacent health centre.
- The inventory of the refrigeration chain has only been updated in 63 % of the health districts.
- The temperature record charts are available at 77 % of the health centres. The main causes of break in the refrigeration chain is the failure of the power supply (57%) and breakdowns in the refrigeration equipment (14%).

- Safety of injections

The national strategy for the safety of injections was drawn up in 2002.

- In the country as a whole, 73 serious cases of APIR were notified from January to July 2006;

- 100% of the health training procedures which vaccinate use self-blocking syringes ;
- 37% of health centres have APIR registers
- Safety boxes are available at all health centres..

- Elimination of waste

The operational procedure for the destruction of used material varies from one provincial authority to another.

The destruction of used syringes and needles is carried out at district level principally by incineration (33%) or by burning/burying (29%). For the districts which have an incinerator, the system for collecting safety boxes from the health areas to the SSD only functions in 17% of cases.

- The destruction of used material from the health centre is carried out by burning (40%), incineration (27%), and burning/burying.
- There is still a not insignificant proportion (11%) of health training procedures in which the used syringes and needles are left in the courtyard or around the destruction area.
- 45% of the health centres collect used syringes in safety boxes.

2.3.3.2.5. Supply of vaccines, vitamin A, and consumables

System for supplying vaccines[8]

The CTG/EPI operates two distribution channels for anticipated multi-annual supplies, corrected at the latest in July for the following year.

First channel : UNICEF is responsible for acquiring the vaccines financed by GAVI and certain of the partners. It carries out procurement operations exclusively from manufacturers whose products are pre-qualified and in accordance with the formal procedures of the Copenhagen centre.

Second channel : CENAME is responsible for vaccines associated with routine EPI, based on its experience with the importing of essential medications, and imports vaccines on the basis of the WHO standards relating to pre-qualified products. Suppliers are retained after restricted consultation procedures, in the absence of administrative performance specifications and without formalised technical specifications. This shortcoming demonstrates the lack of co-operation between CENAME on the one hand and DPM and DRFP on the other.

The acceptance procedures for the vaccines are carried out in a satisfactory manner on the administrative level (in particular, there is a vaccine acceptance report) and the commercial level. However, no vaccine quality control is applied to vaccines supplied via UNICEF, and remains embryonic for operations initiated by CENAME.

The capacities and prerogatives of the central bodies such as DPM and LANACOME need to be improved, particularly with regard to the procedure of release batch by batch, which is still not effective.

The review noted that:

- 6 DPSP out of 10 have an annual supply/distribution plan for vaccines, vitamin A, and consumables;

[8] Evaluation of the system for the supply of vaccines in Cameroon, April 2006

- In all 10 DPSP, the registers and files for stocks of vaccines, vitamin A, and consumables are up to date. 2 DPSP, however, have not updated the situation with regard to injection material;
- 8 DPSP out of 10 calculate the monthly loss rate for each antigen.
- A breakdown in stock was detected in 3 DPSP out of 10 in the course of the first half of 2005.
- Stocks of time-expired vaccines have been observed in 4 provincial cold stores.
- There are registers and files for stocks of vaccines, vitamin A, and consumables held at 96% of the health districts, but they are only up to date at 87% of the districts.
- 92% of the district health services calculate the rate loss for each antigen.
- 73% of the health centres have a vaccine stocks and consumables management register which is up to date.

Breakdowns in stocks of vaccines and injection material have been ascertained: 27% of the health centres had experienced breakdowns in stocks of BCG, VAR (12%), and yellow fever (10%).

This local unavailability of vaccines is the fifth principal reason put forward by mothers to the National Survey into Vaccination Cover to justify not having their children vaccinated.

2.3.3.3. Initiatives for speeding up the fight against disease

The initiatives for fighting disease are an important element among vaccination activities in Cameroon. The eradication of poliomyelitis, the control of measles and yellow fever, and the elimination of maternal and neonatal tetanus have been intensified during the period 2001-2005.

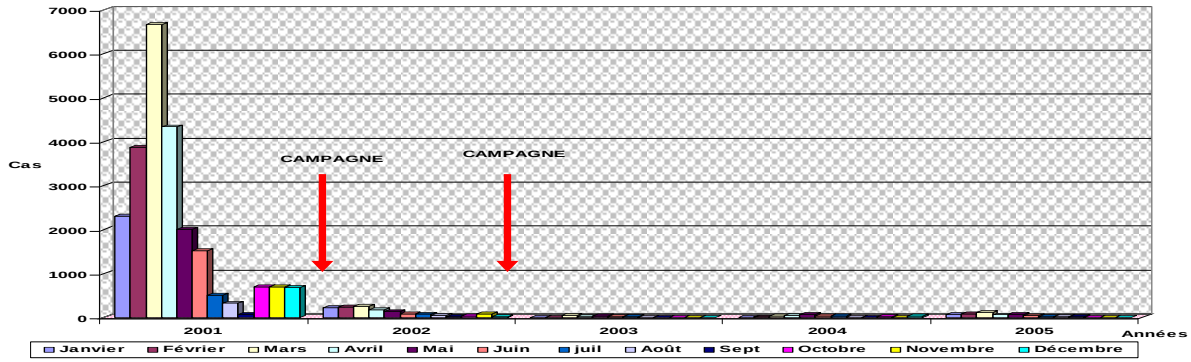
- Eradication of poliomyelitis

The country successfully participated in the synchronised national vaccination days in the sub-Saharan region, and obtained satisfactory results. In 2002 Cameroon achieved the standard for pre-certification. These efforts, however, were disrupted by the appearance in 2003 of two cases of imported wild polio virus, and 13 in 2004, then 01 in 2005. In response to this resurgence of the polio epidemic which affected most countries of Central and West Africa, the Ministry of Public Health, with the support of the partners, decided to participate in the organization of synchronised national vaccination days. Despite the absence of new cases of wild polio virus in the country in the course of the last 18 months, vigilance must be maintained by reinforcing routine vaccination cover, epidemiological monitoring, and response measures in the event of the detection of a new case of wild polio virus.

- Control of measles and yellow fever

Following the vaccination campaigns conducted in 2002 and the overall improvement in the rate of vaccination cover against measles (68% in 2005), the number of cases of measles dropped from 23,691 cases and 258 deaths in 2001 to 528 cases and 29 deaths in 2005, a reduction of 90% in mortality and 95% in morbidity due to measles. After each vaccination campaign, the efforts are maintained in the routine EPI by the administration of vaccine at 9 months, epidemiological monitoring, and vaccination response. Vaccination campaigns in response to yellow fever were also organized in the health districts of Bafia and Meri (January 2004). Given that the routine vaccination coverage rate for these two diseases still remains low (68% in 2005), preventive and response vaccination campaigns should be organized and particular emphasis placed on measures for reinforcing routine EPI

Graph N°3: Development of the number of measles cases in Cameroon in 2001-2005



-Elimination of maternal and neonatal tetanus

The country is committed to eliminating maternal and neonatal tetanus. Thanks to the progressive selection approach for health districts at high risk from this disease, vaccination campaigns for women of child-bearing age were organized in 2002 and 2004 in the first 22 health districts, then in 30 health districts in 2006. The positive effect can be seen in the areas targeted by the campaign. In effect, the number of tetanus cases fell from 219 in 2001 to 139 in 2005. The Ministry of Public Health intends to pursue the efforts which have been started.

However, it needs to be mentioned that the "own delivery" element has been insufficiently applied in the health districts concerned in the vaccination campaign. The follow-up in health districts which organized vaccination campaigns against tetanus has not been carried out on a regular basis, despite the availability of the data.

By way of conclusion of the initiatives for the speeding up of the fight against the disease, Cameroon has committed itself to eradicating poliomyelitis and eliminating/controlling certain transmissible diseases which can be avoided by vaccination (measles, tetanus, yellow fever, viral hepatitis B). The efforts agreed to and the investments made with regard to the eradication of polio risk being compromised due to the resurgence of the epidemic of wild polio virus in the region of Central and West Africa. In addition to this, the epidemiological situation in the other countries in the sub-Saharan region constitutes a threat to the control of measles, yellow fever, and maternal and neonatal tetanus. To this end, while organizing supplementary activities to the programmed vaccination procedures, it has become essential to do everything to consolidate routine activities and the whole of the health system.

2.3.3.4. Integration of services

The notion of the integration of services does not feature as a priority in the health sector. The health sector strategy for 2001-2010 proposes the involvement of all parties concerned around a common vision for the resurgence of the health sector; it is the programme approach which is favoured, however. Each of the programmes is treated as if it were totally independent both with regard to the development partners as well as to the participants at all levels.

Integration passes through a number of preliminary stages:

- Coordination and harmonisation ;
- Integrated planning at the operational level;
- Pooling of material and financial resources;
- Integrated monitoring/evaluation

- Coordination and harmonisation

In Decree 2002/209 of 19 August 2002, relating to the organization of the Ministry of Public Health, provision is made in Article 13 for the Secretary General to "coordinate the action of the central and external services, and for that purpose to hold coordination meetings, of which he shall send the minutes to the Minister".

In Article 18, the same decree makes provision for a monitoring group, which will be responsible, inter alia, "for monitoring the activities of the central and external services, preparing syntheses of programmes of action, and acting upon the reports of activities submitted by the central and external services of the Ministry".

The coordination of the EPI activities is incumbent not only on the internal organization of the programme, but may also involve partners who are taking part with regard to training, financing, logistics, and communications (coordination of EPI activities by the ICC: WHO, UNICEF, JICA, ROTARY, GTZ, UE, AFD, etc.).

At the level of the Provincial Public Health Delegation (DPSP), only 30% are availed of a provincial committee for coordinating vaccination activities which is equivalent to the ICC, while 50% have a provincial organ in the form of the coordination meeting, which may be quarterly, and takes specific form by way of a report.

- Integrated planning at the operational level

Since the restructuring of the EPI in 2002, the annual plans of action have been prepared at all levels of the health pyramid.

In 9 provinces of 10, the EPI provincial unit has a specific EPI 2005 plan of action. Only four (04) provinces have an integrated and budgeted plan of action including the EPI. It may also be noted that there is low participation by the various participants in he preparation of these plans of action, and one province alone was able to have its plan of action validated by a competent authority.

At the operational level, a little over a half of the health districts prepared an EPI plan of action in 2004 (67%), which was improved in 2005 (83%). However, this EPI plan was only integrated into the health district plan of action at 64% of the operational health districts (CV<70%).and 33% of the non-operational health districts (CV<70%).

- Pooling of material and financial resources

The financing of EPI activities at all levels is subject to a coordinated approach linking the State and a certain number of partners: WHO, UNICEF, GAVI, Coopération Française, decentralised collective associations, COSADI, UNFPA, PPTE, ROTARY, Plan Cameroon, Jura Suisse, Douala International Vaccination Centre, CDC Atlanta, HKI, Coopération Allemande, JICA, independent persons, etc.
The same partners likewise contribute to the financing of the activities of other health programmes.

- Integrated monitoring/evaluation

- The system for collecting, archiving, reporting, and monitoring/evaluation of data has been improved. Practically all the health districts (91%) have two monitoring meeting reports;
- The tool for collecting EPI data already integrates the information relating to a certain number of programmes (malaria, AIDS, nutrition) ;
- 96% of the health districts visited organize monitoring/coordination meetings. Most of these meetings are monthly (61%). 26% are held every 3 months and 13% every 2 months;

- Of the 10 provincial public health delegations, 06 organize quarterly coordination meetings, in the course of which the monitoring of the EPI is reviewed, and 9 of them have monitoring graphs for vaccine coverage which are updated and displayed.

2.4. SUMMARY OF SITUATIONAL ANALYSIS : STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS (SWOT) PER COMPONENT

2.4.1 SWOT ANALYSIS (Strengths, Weaknesses, Opportunities, Threats)

The analysis of the situation was carried out by making use of the global EPI review for the period 2001-2005, conducted in two elements at the end of 2005: A qualitative analysis and quantitative analysis on the one hand, and a data update in 2006 on the other. The approach used is the analysis (SWOT) of five operations and three components of the vaccination system.

From this analysis are derived the strengths, weaknesse**s,** opportunities and threats.

Management of the programme

Institutional aspects

Strong points :

- Existence of a health sector strategy document;
- Adoption of the Millennium Development Objectives (MDO), and the Global Immunization Vision and Strategy GIVS);
- Adoption of the conceptual framework of rendering the health districts viable as a Government priority in health matters;
- Good national coverage in health training;
- Restructuring of the EPI with deconcentration at the provincial level (UP-EPI) ;
- Involvement of training institutions with EPI activities;
- Existence of an EPI Norms and Standards document and a National Injection Safety Strategy document
- Standardised training programmes for paramedical personnel training institutions of the Ministry of Public Health
- Application of the programme approach.

Weak points :

- Insufficient infrastructures and equipment at the decentralised level
- Lack of post and profile description;
- Absence of an administrative, accounting, and financial procedures manual at all levels;
- No definition of the criteria and indicators of the function and performance of the deconcentrated EPI units;
- Insufficient distribution of the national injection safety strategy document at the health centre level ;
- Low viability attainment of the health districts.

Opportunities :

- Political will and stability of the country, which render vaccination activities possible in all the health districts;
- Recovery of economic growth and rate of inflation brought under control at less than 3 %;
- Presence of focal points of support (WHO/UNICEF) at the central level;
- Availability of new financing mechanisms to the benefit of the EPI (PPTE, GAVI, C2D, Global Fund, etc.).

Threats :

- Qualitative and quantitative insufficiency of personnel (in particular in basic health units) ;
- Instability of health personnel at all levels due to disaffection, which does not favour continuity and permanence of the strategies implemented ;
- High annual growth rate of the population (2.9 %), resulting in a constant increase in the target populations;
- Rigidity and lengthiness of budgetary procedures do not facilitate the mobilisation of the State's own resources;
- Existence of populations who are difficult to reach :
    - In forested areas, where the living environment is dispersed and the ground swampy ;
    - In the coastal area, where the population live on islands and marshy areas, which require special means of transport;
    - In the savannah area, where the population is essentially nomadic;
    - In the mountainous area, where the terrain is steep.
- Proximity to endemic countries;
- Brain drain.

Planning

Strong points :

- Implementation of the planning process for EPI activities at all levels;
- Existence of the integrated planning background at all levels;
- Practice of EPI planning activities at all levels every year;
- Process of implementation of the "Sector Wide Approach" (SWAP) in progress.

Weak points :

- Non-involvement of other partners in the preparation of plans of action at the operational level ;
- Unsystematic approach to the preparation of integrated plans of action matched to a budget and financing sources at the deconcentrated level;
- No validation of the plans of action by the hierarchy;
- Planning not respect from bottom to top.

Opportunity :

- Adherence of the development partners to the harmonization and coordination of their involvement.

Threats :

- Existence of vertical programmes;
- Movements of personnel between the different sectors of the administration.

Coordination

Strong points :

- Existence of a coordination framework at the central level by way of the General Secretary (Decree 2002/209 of 19 August 2002) ;
- Existence of an Inter-agency Coordination Committee (ICC) at the central level;

- Development of an informal coordination structure by the Provincial Delegation of Public Health
- Effective functioning of 81% of the COSADI and 87% of the COSA.

Weak points :
- Coordination structures not harmonized at the provincial and district levels.

Threats :
- Demands by development partners with regard to their cooperation objectives.

System of motivation

Strong points :
- Improvement of working conditions;
- Strengthening of capacities (training, supervision) ;
- Existence of other forms of motivation to provide recognition of the achievements of personnel..

Weak points :
- No definition of the amounts and frequency of indemnities at all levels of the EPI ;
- No task descriptions at the level of deconcentrated EPI units.

Opportunities :
- Attainment of the HIPC point of achievement;
- Use of a part of the GAVI contribution.

Financing of EPI activities

Strong points :
- Existence of a financial viability plan for 2004-2013, document for putting the case for seeking additional financing;
- Increase in State financing for the programme;
- Budgeting for the Multi-annual Plan (2001-2005) and the annual EPI. plans.

Weak points :
- Insufficient financing for integrated plans of action at provincial and district levels;
- Insufficient financial resources placed at the disposal of the health districts for financing vaccination campaigns;
- Lack of transparency with regard to the financial resources mobilised locally for vaccination campaigns;
- No determination of the exact contribution by the Government to the financing of the integrated EPI plan at all levels.

Opportunities :
- Diversification of the sources of financing for EPI and the health sector
- Implementation of the SWAP ;
- Attainment of the HIPC point of achievement

Threats :
- Existence of several vertical programmes in competition;

- Substantial losses between the allocation and effective release of the financing funds from the State at all levels.

Strengthening of capacities

Strong points :

- Existence of a needs analysis document with regard to EPI training and a training plan;
- Implementation of the MLM course in four (04) provinces out of ten (10) and courses for vaccination service providers in one (01) province;
- Process of review of the prototype EPI training curriculum at the medical and paramedical colleges in course;
- Existence of charts and plans for supervision at all levels.

Weak points :

- Slow implementation of the training plan ;
- Very little planned training supervision carried out at the provincial and health district levels ;
- The number of hours allocated to the EPI at the training institutions and the content of the instruction is insufficient.

Opportunities :

- Training of 02 students at the Faculty of Medicine and Biomedical Sciences and 05 students at the nursing colleges in Douala on MLM courses.

Threats :

- Financing of training activities assured essentially by the partners, at all levels..

Provision of services

Vaccination strategies

Strong points :

- Implementation of an RED approach in all the health districts from 2005 and SASDE in ten (10) health districts located in three provinces (Adamoua, Centre, and East);
- Pursuit of MLM training for the attention of managers and EPI service providers in the provinces.
- Widespread distribution at all levels of the documents essential to the implementation of the EPI.

Weak points :

- Low application of RED in certain health districts;

Opportunities :

- Technical support from the partners (WHO, UNICEF, Plan Cameroon, etc.).

Monitoring

Strong points :

- Monitoring tools in place in each health district ;

- Implementation of monitoring in ten (10) health districts.

Weak points

- Personnel in health areas not trained such as to ensure good monitoring ;
- Insufficient use of EPI manuals in detecting loss of overview ;
- Inefficient record-keeping system;
- Low participation by the communities in the identification and resolution of problems.

Supervision

Strong points :

- EPI supervision tools available ;
- Regular supervision procedures from the central level to the provincial level in the EPI ;
- Allocation of funds in the provinces and districts for supervision.

Weak points :

- Irregular supervision procedures from the provincial level to the districts and from the districts to the heath areas ;
- Integrated supervision not implemented at all levels ;
- Integrated supervision tools not prepared ;
- Insufficient pursuit of corrective actions following supervision ;
- Supervision reports not available at the provincial and district levels;
- Lack of planning and preparation of supervision procedures.

Opportunity :

- Technical and financial support from the various different partners.

Social mobilisation

Strong points :

- Creation and organization of the social mobilisation section of the EPI ;
- Technical and financial support from the partners in social mobilisation;
- Existence of provincial focal points ;
- Involvement of dialogue structures, NGO/associations and sectors apparent at the operational level.
- Existence of social mobilisation committees in some provinces and certain health districts
- Door-to-door communication for the NID in certain health districts
- Involvement of community radio stations to cover difficult access areas
- Involvement of the administrative, traditional, religious authorities and opinion leaders in certain health districts.

Weak points :

- Low performance in the section ;
- Insufficient managerial and operational capacities of the personnel at the central level and provincial focal points;
- No framework of collaboration apparent with regard to the sectors, media, NGO/associations
- Absence of follow-up and evaluation indicators for the IPC activities (Integrated Communication Plan) in the EPI multi-annual plan;

- Low integration of communication activities for the EPI at the central and deconcentrated levels;
- Insufficient technical support for CTG/EPI in the provinces for the implementation of the policies of putting the case and communication.
- Absence of clear directives for the implementation of the communication element of the EPI.
- No definition of the communication objectives;
- Low level of financing for the activities of putting the case and communication
- Low use of the mass media and printed resources.

Epidemiological monitoring

Strong points :

- Existence of monitoring focal points at all levels;
- Good record-keeping of monitoring data at the central and provincial levels.
- Sensitisation of health personnel of all health areas to the notification of cases
- Existence of an analysis tool and a uniform data acquisition mask at all levels
- Training of provincial EPI units in monitoring
- Existence of standard definitions for the diseases being monitored;
- Deconcentration of monitoring at the health district level.
- Existence of a guide for the integrated monitoring of the disease and the response
- Strong commitment by the Government to the integrating of monitoring

Weak points :

- Insufficient participation of the community in epidemiological monitoring
- Absence of a plan for visiting monitoring sites according to prioritisation in certain provinces and health districts
- Disparity between the cases notified and the cases investigated
- Low detection ate of MNT cases
- Shortage of sampling kits at the health district and health area levels
- Information feedback insufficient at al levels.
- Coordination of monitoring activities still not effective at the central level
- No coordination of responses to epidemics

Logistics

Strong points :

- Availability of the results of an inventory of EPI material carried out in 2004
- Existence of an EPI equipment refurbishment plan in the course of implementation
- Maintenance plan in course of preparation

Weak points :

- No maintenance maintenance plan exists at the provincial level
- Absence of a contingency plan at the central and provincial levels
- Lack of training for users of EPI equipment with regard to maintenance.

Safety of injections

Strong points :

- Existence of a document relating to injection safety strategy and the destruction of waste
- Use of self-blocking syringes for vaccination by all the health formations which carry out vaccinations
- Availability of safety boxes at all health centres

Weak points :

- Insufficient use of the APIR registers by the health centres
- No use of self-blocking syringes and safety boxes for other care purposes
- Lack of management coordination of the APIR at the central level

Elimination of waste

Strong points :

- Existence of the national strategy document relating to the safety of injections and the destruction of used injection material

Weak points :

- Failure to respect the standard relating to the destruction of used material by the majority of health formations

Supplies of vaccine, Vit. A, and consumables

Strong Points :

- Existence of two complementary channels with regard to supplies (GAVI via UNICEF and the Ministry of Public Health via CENAME)
- Existence of a budget element specifically for the purchase of vaccines for the attainment of the objectives set by the Government.

Weak points :

- Absence of a formal organizational framework for better definition of tasks
- Insufficient involvement of the National Regulatory Authority so as to be able to guarantee transparency and traceability of the general process of supplies of vaccines.
- Insufficiently performed quality control of vaccines.

Threats :

- The processes for the release of public funds for the purchase of vaccines are slow.

Integration of services

Strong points :

- Existence of a framework for coordination and monitoring of the central services of the Ministry of Health (Decree N° 2002/209)
- Existence of EPI planning capacities at all levels

- Financing of EPI activities at all levels with a coordinated approach involving the State and the partners
- Tools for gathering EPI data, integrating the information relating to a certain number of programmes
- Integration of vaccination activities in the policy and strategy documents of other programmes (reproduction health, HIV/AIDS, onchocercosis, tuberculosis, etc.)

Weak points :

- No regulatory provisions for the creation of ICC-type structures at the provincial and district levels
- Number of provinces and districts preparing an integrated and budgeted plan is still low
- No integration of programmes at the operational level
- Absence of description of the procedures for the integration of the programmes into the decentralised structures (DPSP, health districts)

2.4.2. Major problems

Institutional aspects :

- There is no forward management for human resources,
- There is no manual for material, financial, or accounting management procedures.

Planning :

- No involvement of the other partners in the preparation of plans of action at the operational level ;
- No systematic approach to the preparation of integrated plans of action matched to a budget and financing sources at the decentralised level;
- No validation of plans of action by the hierarchy
- No respecting of planning from bottom to top.

Coordination :

- The coordination structures and mechanisms of the EPI such as the ICC at the central level do not exist at the provincial and district levels.

System of motivation :

- The mechanisms for allocation of indemnities to EPI personnel are not clearly defined or regulated.

Financing EPI activities :

- Lack of transparency in the management of financial and material resources mobilised in favour of the EPI at the decentralised level.

Strengthening of capacities :

- The financing of the implementation of the training plan is not sufficient;
- The content of EPI teaching in the training colleges is inadequate, and the number of hours allocated to it is insufficient.

Provision of services

Vaccination strategies :

- Certain health districts are not well-suited to the RED strategy;
- The SASDE is limited to certain health districts in three provinces

Monitoring :

- Monitoring is only carried out in certain health areas

Supervision :

- Planned training supervision procedures are not being implemented sufficiently at the provincial and health district levels;
- Integrated supervision procedures are not conducted at all levels;
- Insufficient follow-up of corrective actions following from supervision.

Social mobilisation :

- Low managerial, technical, and operational capacities on the part of the personnel responsible for social mobilisation at the central level;
- No framework provided for collaboration with the sectors concerned, the media, the NGO/associations;
- Absence of clear directives for the implementation of the communication element of the EPI;

Epidemiological monitoring

- The community is not involved in epidemiological monitoring;
- Training supervision and the follow-up to the monitoring element are inefficient ;
- Coordination of monitoring activities and response to epidemics is not effective at the central level.

Logistics :

- The maintenance plan for EPI equipment at the central and provincial levels has not been prepared
- There is no contingency plan at the central and provincial levels;
- The EPI infrastructures and equipment at the decentralised levels are not sufficient in quantity and in quality

Safety of injections :

- The personnel do not make sufficient use of the APIR registers at the health centres
- Self-blocking syringes and safety boxes are not used for other car sectors
- Coordination of APIR management and directives at the central level are not clearly defined

Elimination of waste :

- The majority of health formations do not respect the standards for the destruction of used material.

- Footnote on p.12

:9 Strategic orientations of WHO action in the African region 2005-2009, Brazzaville, World Health Organization, African Regional Bureau, 2005

10 WHO, Report of evaluation of Reaching Every District approach in five countries, Brazzaville, World Health Organization, African Regional Bureau, 2005
(unpublished document)

Table 4, p.19

DISEASES

AFP/polio

MNT

Measles

Yellow fever

Table 5, p.20

Vaccine
Quantity (doses) Cost in US$

2.4.2.1 OVERVIEW OF ADMINISTRATIVE DATA ANALYSIS FOR 2001-2005

Table No. 6: **Analysis of the "accelerated campaign against diseases" initiative for the period 2001-2005**

Disease	Indicators	National situation				
		2001	2002	2003	2004	2005
Poliomyelitis	Coverage in VPO3 (%)	NA	NA	72.0	72.1	79.7
	Annualised non-polio AFP rates (Cases/100,000 children under 15 years)	NA	1.4 N≥1	1.7 N≥1	1.7 N≥1	2.8 N≥1
	National immunization day (times/year and coverage)	T1 : 99.5% T2 : 110.2%	NA	NA	T1 :97.85% T2 :99.94%	5 times 1st t : 100.42 2nd t : 102.08 3rd t : 104.37 4th t : 102.25 5th t : 105.03
	Local immunization day (times/year and coverage) as %	T1 : 145%	T1=103% T2=104%	T1 :100.95% T2 :100.11%	T1 :99.44 % T2 : 102.27%	NA
	Quality of AFP stool specimens (normal ≥ 80%)	92.7%	84.4%	77,5%	77.2%	81.6%
	Confirmed cases of poliomyelitis	0	0	2	13	1
TMN	Coverage of VAT2 and Plus (%)			53.1	56.4	60.2
	Percentage of districts having notified at least one case of MNT in one year	NA	47.6	20.8	20	11,9
	MNT campaigns number of HDs (n), and coverage (%)	NA	DS : 22 CV : 73.2	NA	DS : 22 CV : 62.4	NA
	Number of cases	143	256	196 notified 59 investigated	145 notified 64 investigated	139 notified / 36 investigated
Measles	Measles vaccine coverage (%)	47	53	60.7	63.8	68.3
	National campaign (age groups and coverage)	NA	T1 :96% T2 :93%	NA	NA	NA

Disease	Indicators	National situation				
		2001	2002	2003	2004	2005
	Number of cases	23691	1448	899 invest./755 notified	1038 invest./736 notified	1328 notified/1055 investigated.
	Number of deaths	258	37	18	25	29
Yellow fever	Yellow fever vaccine coverage (%)	NA	NA	NA	58.7	68.3
	Percentage of districts having notified at least one case of suspected yellow fever in one year	NA	NA	34	50	55
	Organised prevention campaigns (number of HDs and coverage)	NA	NA	NA	NA	NA
	Number of cases	NA	NA	156 investigated/58 notified	126 notifed/434 investigated	83 investigated/301 notified

Table No. 7 : Analysis of routine EPI per system component

System component	Indicators	National situation				
		2001	2002	2003	2004	2005
Routine coverage	DTC3 coverage	43%	63.45%	72.6%	72.6%	79.71%
	% of districts with a coverage in DTC3>80%	NA	18.49% out of 145 HDs	45(31.2%) out of 144	42 (26.4%) out of 159	85 (53 %) out of 159
	% of districts with a specific drop-out rate for DTC3> 10%	NA	61.97%	50	58	36
	Coverage in Vit A supplement 6-11 months	NA	29.28%	100.5%	113.6%	109.1%
	12-59 months	NA	5.29%	14.40%	18.04%	11.6%
	Women in post partum		9.43%	26.43%	40.46%	35.06%
New vaccines	Vaccine coverage in HepB3	NA	NA	NA	NA	79.71%
	Vaccine coverage in yellow fever vaccine	NA	NA	NA	58.7%	68.7%

System component	Indicators	National situation				
		2001	2002	2003	2004	2005
Surveillance	Completion rate of surveillance reports per district at national level	NA	NA	NA	NA	24%
Cold chain / logistics	Percentage of SSDs (statistical subdivisions) equipped with functioning cold chain equipment	ND	ND	69.15%	64.12%	76%
Vaccine security	% of HCs (health centres) using non-reusable syringes for routine immunization	ND	100%	100%	100%	100%
	% of HCs using a BS component for immunization	ND	100%	100%	100%	100%
Vaccine supply	Have there been any stock-outs in vaccines at central level during the last year?	ND	ND	No	No	No
	If yes, duration in months					
	Vaccines concerned					
Communication/ Social mobilisation	Existence of an integrated communication plan in each province (X/10)	Yes, but not in all the provinces				
	Communication focal point in each district (x/ number of HDs	(CBS) Yes, in the health districts				
Financial viability	What percentage has the Government financed overall for EPI?					37% (Estimated)
Links to other health care facilities	Have systematic links been established between immunization services and other healthcare facilities (malaria, nutrition, child health)?	Valid during the integrated immunization campaign Yes, at peripheral level by provincial health supervisors			Vit A	Vit A

System component	Indicators	National situation				
		2001	2002	2003	2004	2005
Availability of human resources	Number of staff in immunization services per 100,000 inhabitants					
ICC	Number of ICC meetings held per year	4	4	4	4	5
Waste management	Is there a waste management plan in the health districts	NA	NA	NA	NA	NA
Programme efficiency	Checks on vaccine wastage rate at national level (yes or no)			No	Yes	Yes
	Transfer of funds on time to districts (GAVI and others to specify)	Yes	Yes	Yes	Yes	Yes

Indicate the data source (Joint WHO/UNICEF form, GAVI reports, EPI administrative data) NB**:** *Non-applicable*

EPI OBJECTIVES, STRATEGIES, ACTIVITIES AND INDICATORS FOR 2007-2011

OBJECTIVES

3. OBJECTIVES FOR 2007-2011 AND STAGES OF THE MULTI YEAR ACTION PLAN

3.1. EPI OBJECTIVES 2007-2011

The 2007-2011 multi annual plan has the following objectives:

1. Achieve a coverage rate of 90% nationally and at least 80% in all health districts for all antigens including Vitamin A (6-59 months, immediate post-partum) by 2011;
2. Introduce new vaccines into the EPI by 2011;
3. All health districts will undertake more intensive communication activities to promote EPI;
4. At least 80% of health districts will achieve satisfactory performance in the surveillance of targeted diseases under EPI by 2011;
5. Achieve pre-certification level for the eradication of poliomyelitis by 2008;
6. Eliminate maternal and neonatal tetanus in Cameroon by 2011
7. Bring yellow fever under control in Cameroon by 2011
8. Eliminate measles in Cameroon by 2011
9. Ensure a supply of quality vaccines and proper equipment for all health centres by 2011
10. Improve the study of injection safety practices on all medical training courses by 2011
11. Ensure that at least 80% of all programme structures are managing EPI efficiently and effectively by 2011
12. Implement at least 80% of the activities in the training plan by 2011
13. Increase financing of EPI by 36% before 2011
14. Improve integration with other health services in all health districts by 2011.

3.2. STAGES OF THE MULTI YEAR ACTION PLAN

Table No. 08 : national priorities, objectives and stages of the multi year action plan

Problems	Objectives	Stages	Regional goals
<u>General programme problems</u> **139/173 Health districts have a vaccine coverage rate below 80% for all the antigens given to children**	1. Achieve a coverage rate of 90% nationally and ≥ 80% in all health districts and for all antigens including Vit. A (6-59 months and post partum) by 2011	***- DTC-HepB3*** 2007 : 82% 2008 : 85% 2009 : 87% 2010 : 89% 2011 : 90% - VAR/YF 2007 : 78% 2008 : 82% 2009 : 85% 2010 : 88% 2011 : 90% ***- VAT*** 2007 : 68% 2008 : 70% 2009 : 72% 2010 : 74% 2011 : 75% ***-All Antigens*** 2007 : 47% DS 2008 : 66% DS 2009 : 79% DS 2010 : 90% DS 2011 : 100%DS	At least 80% of health districts achieve a 90% coverage rate for DTC3 nationally in 2009. At least 80% of the regions will achieve an 80% coverage rate for DTC3 in all districts.

Problems	Objectives	Stages	Regional goals
139/173 Health districts (VAR) have a coverage rate below 80% for all the antigens given to children	1. Achieve a coverage rate of 90% nationally and ≥ 80% in all health districts including Vit. A (6-59 months and post partum) by 2011.	- Vit. A 12-59 months 2007 : 45% 2008 : 55% 2009 : 65% 2010 : 75% 2011 : 80% - Vit. A Post partum 2007 : 60% 2008 : 65% 2009 : 70% 2010 : 75% 2011 : 80% Vit A 6-11 months 100% 2005-2011	At least 80% of the regions will achieve a 90% coverage rate for DTC3 nationally in 2009. At least 80% of the regions will achieve an 80% coverage rate for DTC3 in all districts.

Problems	Objectives	Stages	Regional goals
35/173 Health districts have a drop-out rate above 10%	**Secondary objective 1** 1.1. 173 health districts/173 have a drop-out rate of less than 5% in 2011 for DTC-HepB	2007 : 90% HDs 2008 : 92% HDs 2009 : 96% HDs 2010 : 98 % HDs 2011 : 100%HDs	At least 80% of the regions will achieve a 90% coverage rate for DTC3 nationally in 2009.
138/173 Health districts have a drop-out rate in DTC-HepB which is above 10% or negative	**Secondary objective 2** 1.2. 173 health districts/173 have a drop-out rate < 10% in 2011r for DTC-HepB (5% for Hib)	2007 : 64% HDs 2008 : 74% HDs 2009 : 84% HDs 2010 : 94% HDs 2011 : 100%HDs	At least 80% of the regions will achieve an 80% coverage rate for DTC3 in all districts.
Some vaccine-preventable diseases are not yet covered by the EPI	2. Introduce new vaccines into EPI by 2011	2008 : Hib 2011 : Rotavirus	At least 80% of the regions will have *introduced* the anti-*Haemophilus influenzae* type b vaccine into their national immunization programmes in 2009
<u>Social mobilisation</u> **Weak managerial, technical and operational skills of staff in charge of social mobilisation at central level**	3. Improve communication to promote the programme	2007 : The section is carrying out at least 80% of its activities 2008-2011 : 100%	At least 80% of the regions will achieve a 90% coverage rate for DTC3 nationally in 2009 At least 80% of the regions will achieve a coverage rate of 80% for DTC3 in all districts.
<u>Integrated epidemiological surveillance</u> **The performance indicators for epidemiological surveillance of EPI targeted diseases are not satisfactory** 1.1. The community is not involved in	4. Improve performance of EPI targeted disease surveillance in all health districts 5. Implement a community-	**Poliomyelitis:** The annualised non polio AFP rate > adequate 2 stool specimens > 80% in 10 provinces from 2007- 2011.	There will not be a single wild poliovirus (WPV) associated with acute flaccid paralysis syndrome in circulation.

Problems	Objectives	Stages	Regional goals
epidemiological surveillance 1.2. Training supervision and the follow-up of surveillance measures are ineffective. 1.3. The coordination of disease surveillance and counter-attack measures between the various structures involved at central level (CGT-EPI and DLM – *Direction de la Lutte contre la Maladie- Directorate of Disease Control*) is ineffective.	based surveillance system.	2007 : 60% of COSA[9]s 2008 :70% 2009 : 80% 2010 : 90% 2011 : 100% **Measles and YF** : at least one suspected case per HD per year 2007 : 80% HDs 2008 :86% HDs 2009 :92% HDs 2010 :96% HDs 2011 :100% HDs **MNT** : less than one case per 1000 live births 2007 :30% HDs 2008 :48% HDs 2009 :65% HDs 2010 :82% HDs 2011 :100% HDs	Measles mortality should be reduced by at least 90% compared to 1999 estimates. In all regions exposed to the risk, systematic yellow fever immunization will have reached a coverage level of at least 80% At least 80% of the regions will have eliminated MNT.
Poliomyelitis is not yet eradicated in Cameroon	6. Achieve pre-certification level for the eradication of poliomyelitis by 2008	2005-2008 Ensure that WPV no longer circulates 2005-2011 Maintain surveillance performance indicators at the pre-certification level for the eradication of	There will not be a single wild poliovirus associated with acute flaccid paralysis syndrome in circulation.

[9] Translator's Note: COSA - Comité de soutien et d'appui de base – *a local level support committee*

Problems	Objectives	Stages	Regional goals
		poliomyelitis.	

Problems	Objectives	Stages	Regional goals
21 health districts/173 are still declaring at least one case of MNT per year	7. Eliminate MNT in Cameroon by 2011	From 2011 onwards less than one case of neonatal tetanus per 1000 live births in all districts HD<1/1000 live births (LB) VAT2+ 2007 : 68% 2008 : 70% 2009 : 72% 2010 : 74% 2011 : 75%	At least 80% of the regions will have eliminated MNT
95 health districts/173 are still declaring at least one suspected case of yellow fever per year	8. Bring yellow fever under control in Cameroon by 2011	**From 2011 onwards**: no confirmed cases of yellow fever are declared per year and a single suspected case/HD/year - YF 2007 : 78% 2008 : 82% 2009 : 85% 2010 : 88% 2011 : 90%	In all the regions exposed to the risk systematic yellow fever immunization will have reached a coverage rate of at least 80%
100 health districts/173 are still declaring at least one suspected case of measles per year	9. Bring measles under control in Cameroon by 2011	2007 : 95% reduction in mortality due to measles 90% reduction of morbidity due to measles. To be maintained until 2011 1 suspected case suspect/HD/year - VAR	Mortality due to measles must be reduced by at least 90% compared to 1999 estimates

Problems	Objectives	Stages	Regional goals
		2007 : 78% 2008 : 82% 2009 : 85% 2010 : 88% 2011 : 90%	
<u>Vaccine procurement</u>: **There is no procedure manual for the supply and management of vaccines**	10. Compile and distribute a procedure manual for the procurement and management of vaccines by 2008 11. Ensure a permanent supply of quality vaccines and adequate equipment for health facilities.	2007 : editing and publishing 2008 : distribution 2007 : 100% 2008 : 100% 2009 : 100% 2010 : 100% 2011 : 100%	At least 80% of the regions will achieve a 90% coverage rate for DTC3 nationally in 2009. At least 80% of the regions will achieve an 80% coverage rate for DTC3 in all districts.
<u>Logistics</u> **A plan for maintaining central and provincial EPI equipment has not been drawn up**		% HCs/HDs/DPSPs which offer immunization and have EPI facilities conforming to standard HCs HDs/DPSPs 2007 :70% 85% 2008 :75% 85% 2009 : 80% 90% 2010 : 85% 95% 2011 : 90% 100%	
The EPI infrastructure and equipment at decentralised level are inadequate, both in terms of quality and quantity[10]			

[10] In some zones, the infrastructure will have to be renewed before the equipment can be set up.

Problems	Objectives	Stages	Regional goals
<u>Injection safety</u> **Injection safety policy is not included on all medical training courses**	12. Ensure that the study of injection safety is included on all medical training courses.	2007 : 100% SAB and BdS 30% AEFI 2008 : 100% SAB and BdS 50% AEFI 2009 : 100% SAB and BdS 80% AEFI 2010 : 100% SAB and BdS 100% AEFI 2011 : 100% SAB and BdS 100% AEFI Destruction of waste by HCs in accordance with procedures 2007 : 70% 2008 : 80% 2009 : 100% 2010 : 100% 2011 : 100%	All regions will have adopted the use of non-reusable syringes or equivalent safe injection techniques.
<u>Waste disposal</u> **A significant proportion of medical training courses do not apply current operational practices for destruction of waste material.**			
<u>Institutional aspects</u> **There is no procedural manual for administrative, financial and accounts management**	13. Improve the organisation and management of the programme.	2007 Procedural manual available 2008. Dissemination/training 2009-2011 Application of procedures.	

Problems	Objectives	Stages	Regional goals
System of motivation **The mechanisms for paying EPI staff their salaries have not been clearly and officially established.**		2007 Text setting out the mechanisms for salary payments signed by the supervisor and applied.	
Strengthening of capacities **Insufficient funds available for the implementation of the training plan.**	14. Implement at least 80% of the training plan activities by 2011	2007 30% of training courses carried out. 2008 50% of training courses carried out. 2009 70% of training courses carried out. 2010-2011 80% of training courses carried out.	
Financing of EPI activities **The financial viability of the EPI is not guaranteed** **Lack of transparency in the management of financial resources mobilised locally for EPI.**	15 : Increase EPI financing by 2011. 16. Cf. Objective 12	Government contribution 2007 : 50% 2008 : 60% 2009 : 70% 2010 : 75% 2011 : 80% Traditional and new partners 2007 : 5% 2008 : 20% 2009 : 30% 2010 : 40% 2011 : 50%	

Problems	Objectives	Stages	Regional goals
		Local partners 2007 : 1% 2008 : 2% 2009 : 3% 2010 : 4% 2011 : 5%	
<u>Developing health districts</u> **The under-development of health districts is a limiting factor in the long-term sustainability of EPI activities.**	17. Contribute to the development of health districts 18. Improve integration with other health services in all HDs by 2011.	Number of HDs carrying out integrated coordination, planning and monitoring activities. 2007 : 40% 2008 : 50% 2009 : 65% 2010 : 75% 2011 : 80%	At least 80% of the regions will have links between immunization and other services in aid of child survival, such as vitamin A supplements, mosquito nets treated with insecticide, de-worming, etc.
<u>Planning</u> **Most health districts and provincial delegations do not have an integrated, funded action plan linking them to other partners.**			
<u>Coordination</u> **The central-level EPI coordination structures and mechanisms such as ICC do not exist at provincial and district level.**		All DPSPs and SSDs have an ICC-type coordination structure - 2007: 10 DPSPs 2008 : 173 SSDs.	

STRATEGIES

4. PROGRAMME STRATEGIES

Implementation of EPI in Cameroon is based on 3 strategies:

- Routine immunization carried out on a daily fixed basis in all health centres, on an advance basis in remote villages and through mobile teams in very remote and isolated villages;
- Supplementary immunization activities at fixed locations, using door-to-door teams and on a mobile basis;
- Integrated epidemiological surveillance and disease immunization response.

In order to achieve the above objectives the following operational strategies will be developed:

- Strengthening of the Reaching Every District (RED) approach
  - Planning
  - Training and supervision
  - Monitoring/evaluation and action
  - Strengthening of the advanced and mobile strategy
  - Reinforcement of links with communities (local partners)
- Reinforcement of the Accelerated Strategy for Child Survival and Development (SASDE)
  - EPI plus package
  - PCIME[11] plus package
  - Maternal and neonatal care package
- Reduction of vaccine wastage rates
- Integration of health services into the disaster and emergency plan
- Strengthen staff skills
- Appeals, social mobilisation, communications encouraging behavioural change
- Active surveillance with prioritization
- Disease immunization response
- Development of integrated planning and monitoring at all levels
- Integrated follow-up/evaluation
- Operational research
- Immunization campaigns
- Rationalisation of the supply of quality vaccines
- Construction/renewal of facilities for waste destruction
- Strategies for introducing new vaccines
- Motivation of staff
- Implementation of financial viability strategies
- Development of local partnerships.

4.1. Strengthening the Reaching Every District (RED) and the Accelerated Strategy for Child Survival and Development (SASDE)

The RED approach adopted by the country is recommended by WHO and UNICEF and aims to improve the coverage rate for immunization and ensure its long-term sustainability. RED, which is not a new strategy, involves the improvement of planning, advanced and mobile immunization strategies, links with the community, training and supervision and monitoring for action. Introduced in 2003 in health districts with weaker vaccine coverage, this approach was extended to all health districts in 2005. As a result, the vaccine coverage rate has improved considerably over the last few years. However, implementation of the strategy has always encountered problems in relation to inadequate resources for carrying out the above-described activities and unsuitability for certain health districts. The financing offered by GAVI to strengthen the system will help to support this

[11] Translator's note: PCIME - Integrated Coverage of Child Diseases

approach. The same applies to SASDE which brings together EPI+ activities (immunization, vitamin A, distribution of mosquito nets treated with insecticide, nutrition, etc.). SASDE will gradually be extended to the maximum possible number of health districts.

Planning.

Particular emphasis will be placed on the development of planning which will now be obligatory at all levels, even in health districts and health areas. This planning will be annual, integrated, will take into account the complete range of health facilities and will be implemented on a bottom-up basis. All actors will be involved as stakeholders.

Strengthening of the advanced and mobile strategies.

The stepping up of immunization activities under the fixed, advanced and mobile strategies will require additional financial resources. In particular, development of advanced and mobile strategies will require the programme to close the gap in terms of cold chain equipment for proper conservation and transport of vaccines on the one hand and on the other, to purchase vehicles (motorcycles, bicycles and vehicles for supervision) in order to reach communities living in remote villages (located more than 5 kilometres from a health centre). Implementation of these strategies will involve an increase in the costs related to staffing and the purchase of new equipment.

Strengthening communication with the community.

An integrated nationwide communication strategy plan has been drawn up to strengthen immunization activities. This plan envisages activities in the areas of appeals, social mobilisation and inter-staff communication (IPC). At local level (health district), strategies will be developed to capitalize on local experience acquired through the organization of immunization campaigns for routine EPI. Moreover, support material for social mobilisation to encourage routine EPI (immunization calendars, cards, posters, brochures, reminder slips), which has not been produced for ten years, was reintroduced in 2003 and will require significant resources to adapt communication methods to the appropriate socio-cultural environment.

Training and supervision

Integrated supervision and training will be developed in order to promote the pooling and efficient use of resources.
Supervision and training will be organised at all levels in accordance with EPI norms and standards (4 times a year at central level, 6 at provincial and 12 at local level). There will also be a set of follow-up indicators to complete at provincial and district level.

Improved monitoring/evaluation for action

With the aim of improving the follow-up and evaluation of the programme, integrated monitoring and evaluation activities will be organized at all levels with the participation of the community and various actors (central, provincial and district). Internal and external audits will be conducted once a year. Improvement of immunization data quality will remain a priority. Efforts to improve immunization coverage will be supported by making available quality immunization data through the systematic implementation of reliable management tools in all health centres undertaking immunization activities: immunization cards, registers, check lists and logistics management tools (for vaccines, materials, preservation quality and wastage rates). Moreover, the management of data will be computerised in all health districts with the support of other programmes, in particular those financed by the Global Fund to fight AIDS, Tuberculosis and Malaria. A monthly report of EPI activities will be sent to the Ministry of Public Health and to the ICC partner members. The joint

WHO-UNICEF form will be completed by the end of each year and an annual status report will be sent to GAVI.

4.2. Reduction of drop-out rates

Despite an overall improvement in immunization coverage rates, forty (40) health districts out of 173[12] are not performing well (with an immunization coverage rate below 60% or a drop-out rate higher than 10%. Consequently, the Reaching Every District (RED) approach will be reinforced to counteract this. The health districts in question and each of the health areas with inadequate results will be targeted in order to strengthen their capacity for micro planning, monitoring and evaluation, which in turn will improve immunization activities. This will require additional technical and financial support for these health districts and health areas (planning and supervision support).

4.3. Coordination of data management in relation to Vitamin A supplements

Given the satisfactory reduction of poliomyelitis, the National Polio Immunization Days, which have offered an excellent opportunity for also offering Vitamin A supplements over the last five years, will probably be organized less frequently. Emphasis will have to be placed on the harmonisation of the Vitamin A data collected during routine immunization and campaigns organized by other programmes. It will also be necessary to improve the handling of cases where Vitamin A supplements are required, for example, cases of measles, malnutrition, persistent diarrhoea, acute respiratory infections and women in the immediate post-partum period.

4.4. Reduction in vaccine wastage rates

Adequate supply of vaccines and the reduction of wastage rates will be priority issues. Vaccine wastage rates for BCG are currently high - around 56% - and it is planned to reduce this rate through staff training and the monitoring of stock management at all levels of the health pyramid (central, provincial and local health centres); progress in this area will enable the gains made in terms of vaccines saved to be used for mass campaign activities to reduce the drop-out rate. The open vial policy will be reinforced.

Cameroon will be granted significant but transitory support from GAVI to improve injection safety and introduce new vaccines but the country intends to ensure the permanent availability of vaccines and material (syringes, safety boxes) at all levels by gradually assuming the related costs.

4.5. Development of a maintenance policy

In view of the significant resources which will be mobilised for the development of the advanced strategy and the renewal of equipment for routine EPI (Cf. tables below), an efficient strategy for the maintenance of equipment will be required. Consequently, users and maintenance workers will have to be trained and instruction manuals, management tools such as practical guides, logbooks, temperature charts, user log, etc. will be distributed. Maintenance of larger items of equipment (cold chambers, incinerators, vehicles, outboard motors) will need to be outsourced.

Table No. 9: Plan for renewal of EPI cold chain equipment for 2007-2011

[12] The new division undertaken in 2005 envisages 172 health districts

Type of cold chain equipment	2007	2008	2009	2010	2011
CENTRAL LEVEL	**Qty**	**Qty**	**Qty**	**Qty**	**Qty**
Cold chain	2				
Freezer Vestfrost MF314		4			
Refrigerators Vestfrost MK304		2			
Generator 25 KVA diesel (central and provincial levels)	1	1		1	
PROVINCIAL LEVEL					
Cold chain	1	4	5		1
Freezer Vestfrost MF314	20				
Refrigerators Vestfrost MK304	10				
Generator 25 KVA diesel (central and provincial levels)	4	4	2		
HEALTH DISTRICT					
Cool box	182	250			
Freezer Vestfrost MF314	20	186			
Refrigerators Vestfrost MK304	16	182			
Incinerators	30	30	40		
VACCINATION CENTRE					

<u>Table No. 10</u>: Renewal plan for EPI vehicles for 2007 - 2011

Vehicle Type	2007	2008	2009	2010	2011
CENTRAL LEVEL	**No.**	**No.**	**No.**	**No.**	**No.**
4-wheel drive vehicles	2				2
Station wagon 4-wheel drive vehicles	9		1		9
Motorcycles	3				3
Refrigerated trucks	1				
Surveillance vehicles		1			
Trucks for injection equipment	1				
PROVINCIAL LEVEL					
Surveillance vehicles	4				4
Motorcycles	30			30	
Outboard motors		3	2		
Other freight vehicles			2	2	11
HEALTH DISTRICT					
4-wheel drive vehicles	25	25	25	25	25
Motorcycles	40	40	40	40	40
Outboard motors	8		2	2	2
IMMUNIZATION CENTRE					
Motorcycles	117	117	117	117	117
Bicycles	350			400	

4.6. Strengthening of staff skills

Improving the management of the programme requires a strengthening of the skills of those involved and this will incur additional costs. The strengthening of skills will focus on the training of staff (district management teams and those in charge at intermediary and central level) involved in EPI management via new EPI training courses developed by WHO (each session of this course lasts two weeks and requires high-level expertise). Immunization staff will also be trained in EPI norms

and standards which will be updated. Training in financial procedures is also envisaged. By strengthening staff skills it will also be possible to reduce vaccine wastage rates though the application of the open vial policy, rationalisation of immunization sessions, including the advanced strategy, the conducting of mass campaigns and modernisation of the management of cold chain equipment.

Furthermore, in the area of waste management emphasis will be placed on the implementation of the injection safety policy and the construction of incinerators, which will require significant funds.

4.7. Active surveillance with prioritization of sites

Implementation of the recommendations set out in the 2003 surveillance review has involved the decentralisation of active surveillance at health district level. At this level, district supervisors must review a network of priority health centres every month to check whether any cases have been registered and investigated by the relevant staff. Samples are taken and dispatched to the laboratory at the Centre Pasteur in Yaoundé for which the transportation costs are reimbursed. Periodic monitoring and coordination meetings are financed (quarterly at central level, twice a month at provincial level and on a monthly basis in the districts). A strengthening of coordination at the various levels is envisaged, as is greater involvement of the community. This coordination remains one of the main priorities of the programme and should receive additional funding so that it can be extended further into the community.

4.9. Development of support for integration

As mentioned above, the EPI will facilitate the integration policy which is currently of paramount importance for the Ministry of Public Health. In this context the practice of integrated planning and monitoring at all levels and integrated supervision and follow-up/evaluation will become the norm. To do so, there will be greater support for improved coordination of activities and operations at the various levels. With the exception of Vitamin A supplements under EPI, activities will be increasingly integrated under the Integrated Coverage of Child Diseases and Accelerated Strategy for Child Survival and Development initiatives. These two strategies offer an opportunity to complete immunization for children who have not received the appropriate vaccine doses by the age of 12 months and to offer a complete package of services to children.

4.10. Operational research

Operational research in immunization will be developed in order to sustain the progress seen in different areas of the EPI. Those areas which will be targeted are support for students on community medicine internships and at the end of their general and specialist medical training and research on the impact of immunization or the introduction of new vaccines.

4.11. Organisation of mass immunization campaigns and immunization response

Additional immunization activities will be organized as part of the initiative to eradicate poliomyelitis, control measles and yellow fever, eliminate maternal and neonatal tetanus and provide Vitamin A supplements.

Due to the persistent circulation of the wild polio virus in neighbouring countries it will be necessary to strengthen active epidemiological surveillance measures throughout the country, particularly in provinces located close to borders and to draw up an emergency response plan based on the likely import of new types of virus.

A follow-up measles immunization campaign will be organized in 2009 and then every 5 years to protect children aged 9 months to 5 years for as long as immunization coverage against measles remains under 90% in the routine EPI.

With regard to the elimination of maternal and neonatal tetanus, the country has committed itself to implementing the high risk immunization approach by progressively targeting health districts at risk and conducting three sessions of immunization campaigns for women aged 15 to 49 years. The first two sessions in 2002 and 2006 involved 22 and 30 health districts respectively.

As part of efforts to control yellow fever mass immunization campaigns will be organized in 17 high risk districts of four provinces: Adamaoua province (02 districts): Ngaoundéré Urbain, Ngaoundéré Rural ; Central province (8 districts): Bafia, Ebebda, Monatélé, Ndikiniméki, Ngok-Mapubi, Ntui, Sa'a, Yoko; Eastern province (01 district): Messamana; province of the Extreme-North (6 districts): Méri, Maroua Urban, Maroua Rural, Mogodé, Mokolo and Tokombéré.

4.12. Clean births

"Clean births" is the third element involved in achieving the objective of elimination of MNT. This will require harmonized efforts as a follow up to MNT and routine EPI immunization campaigns with the effective implementation of the activities planned as part of the clean births initiative in the health districts concerned.

4.13.Rationalisation of the supply of quality vaccines

Recommendations resulting from the evaluation of the supply system will be applied, in particular:

- Harmonising procedures and tools used for quantitative and qualitative prediction of requirements and orders of vaccines and equipment
- Drawing up a schedule of conditions for the administrative parties and technical specifications based on the capacities of the DRFP[13], the Central Market Service and the DPM.
- Establishing and introducing procedures related to supply and taking account of the operational characteristics of each supply channel. Formalisation of these procedures will also take into account Cameroon's new member status in the World Trade Organisation as of 2006 (imposing an obligation of transparency and visibility in operations which mobilise public funds).
- Draw up an appeal for the attention of MINEFI (Ministry of Finance) to ease payment operations and to reduce taxes and customs duties on cold chain equipment and material destined for EPI.
- Update and finalize the multi annual immunization plan with costs and financing and link it to the strategic plan for the supply of vaccines.
- Strengthen national capacities in the areas of stock management, batch use and monitoring of AEFI
- Implement established procedures and tools for the supply of vaccines
- Regularly monitor product tendencies and vaccine prices on the world market.
- Further develop "biological checking" activities at LANACOME and equip it for carrying out vaccine quality checks
- Develop and introduce general procedures for the organization, functioning and management of each of the main actors such as DPM - IGSP - GTC/EPI - LANACOME - CENAME.

[13] Direction des Ressources Financières et du Patrimoine – unofficial translation: Directorate of Financial Resources and Cultural Heritage

4.14. Construction/renewal of waste destruction facilities

The national injection safety strategy adopted in 2003 enforces the use of non-reusable syringes for immunization, the collection of safety boxes and their proper destruction in high-temperature incinerators, or by burning or burying them. Implementing the strategy for use of these new technologies will require intensification of staff training and the purchase/construction of incinerators. As an extension to the strategy it is envisaged that all biomedical waste will eventually be destroyed and, to this end, the legal framework will be reviewed.

4.15. Introduction of new vaccines into EPI.

The improvements of immunization coverage and in immunization services which we have seen during the period 2002-2004 have made it possible to introduce new vaccines. Following the introduction of the yellow fever vaccine in 2004 and the viral hepatitis B[14] vaccine in 2005, the next vaccines to be introduced will be *Haemophilus influenzae b*[15] in 2008 and rotavirus in 2011, given the epidemiological significance of these diseases and the cost-effectiveness benefit. The introduction of these vaccines will incur significant costs, in particular for the purchase of the vaccines, the modernization of cold chamber storage and the retraining of staff. Consequently, as part of the vaccine independence initiative which Cameroon has signed up to there is a credit line earmarked for the purchase of these new vaccines within the Ministry of Public Health's budget. In addition, once Cameroon has reached the completion point under the Heavily Indebted Poor Countries initiative (HIPC and C2D – the Debt Reduction and Development Contract with France) the resources generated by the debt reduction initiative will be used in part to gradually assume the costs of these new vaccines and cold chain facilities. GAVI support will be adjusted on a quid pro quo basis, depending on the amount the State is able to pay.

4.16. Motivation of staff

The Ministry of Public Health will ensure that staff are motivated in a variety of ways in order to achieve and maintain objectives at high levels. One of the factors for targeted motivation is systematic feedback – for example, sending letters of support or reprimands, setting up suggestion boxes, radio debates, conducting small-scale vox pop surveys, etc. In some cases funds will be allocated to implement the action plan in the form of bonuses for those health districts which deserve them. Salaries and bonuses for staff working full-time in the programme will be regulated and paid on a regular basis.

4.17. Strengthening of community participation

The objective will be to set up mechanisms to help organize communities and increase their participation, in particular:

- Developing community-based epidemiological surveillance systems;
- Drawing up contracts with community structures for certain EPI activities such as social mobilisation, searching for those persons lost to follow up, drawing up lists of prospective candidates for immunization;
- Capacity building.

4.18. Implementing strategies and activities for the financial viability of EPI

[14] Plans for introducing yellow fever and viral hepatitis B vaccines, Cameroon ;
[15] Data from the sentinel site of the Chantal Biya Foundation, Yaoundé.

Given the significant resources which will be mobilised and are required to achieve the objectives set, appeals and capacity building will be used as strategies for developing the programme's financial viability in order to make it sustainable in the long term. In particular, it will be necessary to develop a sales pitch to ensure that immunization remains an important national priority; strengthen managers' potential for financial planning throughout the country and further develop mechanisms for the reduction of financial shortfalls at all levels. This in turn will improve the financial contribution from all partners, both traditional and new, national and local.

4.19. Development of local partnerships

The involvement of local partners in management will be increased at all levels. At intermediary level coordination structures identical to those for the ICC will be put in place. In health districts there are plans to strengthen the partnership between public services and the private sector, NGOs, associations and organized groups. A 2003 circular from the Ministry of Public Health stipulates the framework for execution of immunization activities.

Since 2004, the Ministry of Public Health has had an organizational framework which governs the partnership arrangements with all of the national participants. For its part, the ICC, which holds regular sessions, constitutes a framework for mobilization and for coordinating the activities of the international partners. It is to be broadened to include representatives of the Presidency of the Republic, the National Assembly and the Prime Minister, other ministerial departments and those development partners not yet included.

5. KEY ACTIVITIES, INDICATORS AND TIMING CHART (Table No. 11)

Services provided

1 – Achieve a coverage rate of 90% nationally and 80% in all health districts for all child antigens, including Vit A (6-59 months, post-partum) by 2011

Strategy	N°	Key Activities	Indicators	Timing Chart				
Strengthening of RED				2007	2008	2009	2010	2011
Planning	1.1	Organise integrated micro planning each year taking a bottom-up approach (health regions (HRs), health districts (HDs))	Proportion of health areas, health districts and DPSPs with an integrated micro-plan					
Training and supervision	1.2	Formalise and organize integrated training and supervision and follow up at various levels (feedback)	Amount of training and supervision carried out at each level per year					
Monitoring/evaluation for action	1.3	Organise integrated monthly monitoring for each year at all levels	Amount of integrated monthly monitoring carried out at each level per year					
	1.4	Organise six-monthly integrated monitoring at all levels	Amount of integrated six-monthly monitoring carried out at each level per year					
	1.5	Organise mid-term and full-term reviews	Review reports available					
Strengthening of the advanced and mobile strategy	1.6	Organise immunization into an advanced strategy and conduct other integrated activities for child survival	Proportion of HCs having conducted 80% of planned advanced strategy sessions					
	1.7	Organise immunization into a mobile strategy (to cover health regions without HCs and/or those which are difficult to access)	Proportion of HCs having conducted 80% of planned mobile strategies					
Reduction of drop-out rates	1.8	Organise active searches for those persons lost to follow up	Drop-out rates					

Strategy	N°	Key Activities	Indicators	Timing Chart				
Strengthening of RED				2007	2008	2009	2010	2011
	1.9	Organise communications advocating behavioural change (beneficiaries and service providers) in favour of EPI	Proportion of mothers using the immunization calendar					
	1.10	Make staff aware of the need to follow up on the immunization status of every child registered	Proportion of staff consulting or following up systematically on the immunization status of the child.					
Coordination of data management in relation to Vit. A. supplements	1.11	Introduce and apply a policy of sharing data between the ONCHO and EPI programme and with other relevant programmes	1- Existence of formal instructions for sharing data between programmes 2 – Completeness of data sharing					
Reduction of vaccine wastage rate	1.12	Improve the monitoring of vaccine usage	Wastage rate **brought under control** at all levels					
	1.13	Proceed with the repair and renewal plan for cold chain equipment	Proportion of HCs having obtained equipment in accordance with the plan					
	1.14	Train users of equipment to carry out preventive and remedial maintenance	Proportion of staff trained					
	1.15	Apply the **open vial policy**	Proportion of HCs applying the open vial policy					
IMCI	1.16	Draw up an immunization status for children aged 12 to 59 months who have not completed immunization (measles and yellow fever)	Coverage of children aged 12-59 months					
Operational research	1.17	Ensure that the Scientific Committee becomes operational	Work reports available					
	1.18	Support immunization research activities	Documents of research results available					

2 – Introduce new vaccines into the EPI by 2011

Strategy	N°	Key activities	Indicators	Timing chart				
				2007	2008	2009	2010	2011
Strategies for introducing new vaccines	2.1	Finalise studies of the situational analysis	Morbidity burden of Hib known					
	2.2	Draw up a plan for introducing the vaccine	Plan available					
	2.3	Train staff at all levels	Proportion of staff trained					
	2.4	Procure new vaccines	New vaccines available at all levels					
	2.5	Appeal for new vaccines	See objective 3					
	2.6	Produce aids to social mobilisation	See objective 3					
	2.7	Produce revised monitoring tools	See objective 3					
	2.8	Implement the plan	% of plan activities implemented					
	2.9	Follow-up/evaluation of the plan	Reports					
	2.10	Implement the finance scenario for the new vaccines (development of State/partner contributions from 2007 to 2011)	Realisation rate for programmed financing					
Provide access to immunization services during humanitarian crises	2.11	Incorporate immunization services into plans and preparatory activities for emergencies	Existence of an immunization component in the national plan for emergencies and disasters					
	2.12	Re-establish immunization services for populations in emergency situations	Coverage of populations during emergency situations					
	2.13	Include vaccine-preventable diseases in regular integrated surveillance and monitoring systems in order to be prepared for emergency situations	Existence of follow-up indicators for these diseases in emergency situations					

Social mobilisation

3- (100% of health districts carrying out more intensive communication activities to promote EPI)
Strengthen communication to promote the Programme

Strategy	N°	Key activities	INDICATORS	Timing chart				
				2007	2008	2009	2010	2011
Strengthening the staff skills	3.1	Ensure that the Social Mobilisation section of CTG/EPI becomes operational	Section performance					
	3.2	Train members of the CLC (10/HD/2 years, then 5/HD/3 years) in the health areas	Proportion of health areas with trained CLC members					
	3.3	Train the district focal points	Proportion of HDs with trained focal points					
	3.4	Train committee members and provincial focal points	Proportion of trained committee members and focal points					
Integration (Appeals, social mobilisation, communication advocating a change in behaviour)	3.5	See objective 14						
Appeals	3.6	Make an appeal to decentralised territorial communities/groups, NGOs, associations and the private sector for their support of immunization activities	Number of appeal reports					
Follow-up and evaluation	3.7	Develop a monitoring system for the implementation of social mobilisation activities	Tools and reports available					
Strengthening links between the community and	3.8	Produce and distribute social mobilisation support material (routine EPI, surveillance, campaigns)	Proportion of HDs having received social mobilisation support material					

health services	3.9	Stipulate communication activities in a contract with the SDDs/NGOs/associations and the media	Number of health areas having at least one current contract					

Integrated disease surveillance

4-At least 80% of health districts achieve satisfactory performance in the surveillance of targeted diseases under EPI by 2011. Strengthen performance in the surveillance of targeted diseases under EPI in all health districts

Strategy	N°	Key activities	INDICATORS	Timing chart				
				2007	2008	2009	2010	2011
Active surveillance with prioritization	4.1	Organise active surveillance swoops according to priorities at health district level	Proportion of visits made by site and per month according to priorities					
	4.2	Extend surveillance on a case-by-case basis from vaccine-preventable diseases to other diseases.	Number of diseases under surveillance on a case-by-case basis					
	4.3	Assume responsibility for the costs linked to transport of specimens for poliomyelitis, measles, yellow fever and Hib	Proportion of transport costs covered					
	4.4	Provide DPSPs, HDs and health regions with the materials necessary for taking specimens	Proportion of structures having experienced stock out					
	4.5	Provide those laboratories involved in surveillance with proper equipment, reagents and other materials and equipment						
	4.6	Organise accreditation sessions for laboratories on an annual basis	Session report					
	4.7	Hold quarterly and annual meetings of the certification committees	Meeting reports					
	4.8	Hold quarterly coordination meetings with the provinces	Meeting reports					
	4.9	Draw up a national plan in preparation for epidemics and prevention and response for specific diseases	National plan available					

Capacity building	4.10	Organise training sessions for staff in charge of surveillance	Proportion of staff trained					
Training and supervision	4.11	Organise training sessions for surveillance activities	Supervision reports (completeness)					

5- Achieve pre-certification level for the eradication of poliomyelitis by 2008

Strategy	N°	Key activities	INDICATORS	Timing chart				
				2007	2008	2009	2010	2011
Response	5.1	Organise response campaigns in the event of a wild poliovirus being detected	Number of response campaigns conducted					
Strengthening of surveillance	5.2	See surveillance						
Strengthening of routine EPI	5.3	See RED						

6- Eliminate maternal and neonatal tetanus in Cameroon by 2011

Strategy	N°	Key activities	INDICATORS	Timing chart				
				2007	2008	2009	2010	2011
Immunization campaigns	6.1	Organise immunization campaigns against tetanus as part of the implementation of the high-risk approach	MNT campaign reports					
Strengthening of surveillance	6.2	See surveillance						
Response	6.3	Organise immunization campaigns where a case of neonatal tetanus is detected in those health districts concerned	Response campaigns conducted by health districts					
Strengthening of routine EPI	6.4	See RED activities						

Clean births	6.5	Integrate and implement the clean births initiative in the public health centres of health districts targeted for elimination of MNT (staff training, traditional midwives, improvement of the range of techniques, etc.)	Proportion of health districts targeted by the MNT campaign practicing clean births	

7-Bring yellow fever under control in Cameroon by 2011

Strategy	N°	Key activities	INDICATORS	Timing chart				
				2007	2008	2009	2010	2011
Immunization campaigns	7.1	Organise preventive campaigns in high-risk health districts (10 in 2006, 10 in 2007, X in 2008, X in 2009, X in 2010 and X in 2011) with the administration of Vitamin A	Campaign reports for the targeted health districts					
Strengthening of surveillance	7.2	See surveillance						
Response	7.3	Organise response campaigns in the event of an epidemic breaking out in the health districts concerned	Response campaign reports					
Strengthening of routine EPI	7.4	See RED						

8- Keep measles under control in Cameroon by 2011

Strategy	N°	Key activities	INDICATORS	Timing chart				
				2007	2008	2009	2010	2011
Immunization campaigns	8.1	Organise a follow-up campaign in the seven southern provinces in January 2007 with vitamin A supplements, distribution of insecticide-treated mosquito nets and de-worming	Integrated campaign reports					

Strategy	N°	Key activities	INDICATORS	Timing chart				
				2007	2008	2009	2010	2011
	8.2	Organise a follow-up campaign in ten provinces in 2010 with Vitamin A supplements, distribution of insecticide-treated mosquito nets and de-worming	Report on the integrated national follow-up campaign					
Strengthening immunity (RED)	8.3	Include the 2nd dose of measles vaccine in the routine EPI	Coverage of the 2nd dose of measles vaccine					
Strengthening surveillance	8.4	See surveillance						
Response	8.5	Organise localised response activities in the event of an epidemic in health districts	Proportion of health districts having organised a response in the event of an epidemic					
RED	8.6	See RED strategy						
Taking charge of cases and administering Vitamin A supplement	8.7	Train staff in protocols for administering Vitamin A supplements and taking charge of cases	Number of staff trained					

Vaccine procurement and logistics

9- Ensure a supply of quality vaccines and proper equipment for all health centres by 2011

Strategy	N°	Key activities	INDICATORS	Timing chart				
				2007	2008	2009	2010	2011
Rationalisation of quality vaccine procurement	9.1	Draw up, distribute and apply the terms of the specifications for the various stakeholders in the vaccine procurement system	Proportion of stakeholders applying the specifications					
	9.2	Establish formal procedures relating to the procurement of vaccines	Procedures document available					

Strategy	N°	Key activities	INDICATORS	Timing chart				
				2007	2008	2009	2010	2011
	9.3	Provide efficient procurement of vaccines and materials at all levels	Number of days stock out for vaccines or material					
	9.4	Integrate the monitoring of the vaccine and material procurement system into the Monitoring component	Monitoring element for vaccines is included in the monitoring tool at all levels					
	9.5	Equip the quality control laboratory	Proportion of standard equipment available					
	9.6	Provide training sessions for the various stakeholders on the terms of the specifications (CENAME, DPM, EPI, LANACOME)	Proportion of stakeholders trained					
	9.7	Order vaccines with PCV and distribute them in accordance with the BUNDLING principle	Proportion of orders having respected the principles					
	9.8	Draw up long-term forecasts for vaccines in close collaboration with vaccine manufacturers, international institutions and fund providers	Annual “forecast” document available					
	9.9	Integrate IMCI vaccine requirements into the vaccine procurement system	Number of days stock out in vaccines and materials					
	9.10	Update the equipment renewal plan on an annual basis	Annual equipment renewal plan updated					
	9.11	Purchase and distribute new equipment in accordance with the equipment renewal plan	Proportion of medical facilities equipped in accordance with the plan					
	9.12	Provide training for users of the new equipment	Proportion of staff trained in the use of the new equipment					
	9.13	Finalise the maintenance plan for EPI equipment	Maintenance plan for EPI equipment available					

Strategy	N°	Key activities	INDICATORS	Timing chart				
				2007	2008	2009	2010	2011
	9.14	Implement the maintenance plan for EPI equipment	Proportion of equipment in working order					
	9.15	Construct/renew infrastructure used to accommodate the EPI at central, provincial and health district level	Proportion of EPI infrastructure constructed/renewed at each level					

10- Improve the practice of injection safety on all medical training courses by 2011

Strategy	N°	Key activities	INDICATORS	Timing chart				
				2007	2008	2009	2010	2011
Construction/renewal of facilities for the destruction of waste	10.1	Select the type of incinerator	Technical specifications (structural engineering and biomedical) of the standard type of incinerator available					
	10.2	Construct an incinerator in each health district	Proportion of districts eliminating waste in an incinerator					
	10.3	Dig pits for burning and burying waste at medical facilities which do not have them	Proportion of health districts not having an incinerator and eliminating waste by placing it in a pit in accordance with regulations					
Strengthening of capacities (procedures)	10.4	Integrate the waste destruction element into the framework of integrated supervision	The integrated supervision framework includes a waste destruction element					
	10.5	See implementation of training plan						
	10.6	Provide surveillance of undesirable vaccine-related effects and apply appropriate measures	Reports on the management of undesirable vaccine-related effects					

Management of the programme

11-Ensure that at least 80% of the programme structures practice efficient and effective management of EPI by 2011. Strengthen the organisation and management of the programme by 2011

Strategy	N°	Key activities	INDICATORS	Timing chart				
				2007	2008	2009	2010	2011
Motivation of staff (management)	11.1	Draw up, sign and distribute a text relating to the allocation of pay to full-time EPI staff	Text relating to allocation of pay available					
	11.2	Identify sources of finance and ensure payment of salaries	Salary payment slip available					
Capacity building	11.3	Draw up a manual of management procedures and have it adopted	Manuel of procedures available					
	11.4	Train all members of the management teams in health districts delegations in the use of the management procedure manual	Proportion of management team members in health districts trained in use of the management procedure manual					
	11.5	Distribute the manual at all levels	Proportion of medical facilities with a copy of the manual - by level					
Training and supervision	11.6	Conduct training and supervision to ensure the proper application of procedures at all levels	Proportion of health districts producing management reports in accordance with the manual - Proportion of reports on training and supervision					

Capacity building

12- Implement at least 80% of the activities in the training plan by 2011

Strategy	N°	Key activities	INDICATORS	Timing chart				
				2007	2008	2009	2010	2011
Training	12.1	Update the EPI training plan and add: Training/re-training of laboratory staff, training of SAF staff on the application of agreed methods of administrative and financial management under SWAP (Sector Wide Approach) initiative	EPI training plan updated and available					
	12.2	Investigate financing possibilities for the training plan	Proportion of training courses financed					
	12.3	Organise the training sessions envisaged in the plan	Proportion of training courses organised					
	12.4	Monitor and evaluate the implementation of the plan	Implementation reports					

Financing

13- Increase financing of EPI by 2011

Strategy	N°	Key activities	INDICATORS	Timing chart				
				2007	2008	2009	2010	2011
Appeals	13.1	Develop the "immunization must remain an important national priority" sales pitch	Proportion of the annual EPI plan financed by the Government – Involvement of the authorities in the EPI programme at various levels					
Capacity building	13.2	To strengthen the national potential for financial planning both within EPI and the Ministry of Public Health	Proportion of staff trained in financial planning (EPI, Ministry of Public Health)					
Appeals	13.3	Increase by 50% the financial contribution of both traditional and new partners	Growth rate of EPI financing by partners - Number of new partners financing EPI					

Strategy	N°	Key activities	INDICATORS	Timing chart				
				2007	2008	2009	2010	2011
	13.4	Increase from 40 to 80% the Government's financial contribution to EPI	Growth rate of EPI financing by the Government					
	13.5	Ensure that at least 5% of the annual EPI action plan is financed locally by local partners	Proportion of EPI action plan (health districts and DPSPs) financed by local partners					
Development of local partnership	13.6	Promote the signing of contractual agreements between local health services, SSDs, NGOs/associations, local community groups and the private sector	Proportion of contracts signed and coming into force					

Integration and strengthening of the system

14- Increase the involvement of other medical stakeholders in all health districts by 2011

Strategy	N°	Key activities	INDICATORS	Timing chart				
				2007	2008	2009	2010	2011
Development of integrated coordination at all levels	14.1	Contribute to the reorganisation of the ICC as part of the development of SWAP-Health	Text setting out the reorganisation of the ICC as part of the SWAP health vision available					
	14.2	Draw up, have signed and distribute the text relating to the creation and operation of an ICC type coordination structure at DPSP and SSD levels	Text setting up the coordination structures at DPSP and SSD level available					
	14.3	Organise quarterly meetings of the ICC at all levels	Meeting reports					
Development of integrated planning and monitoring at all	14.4	See ACD (Objective 1)						

Strategy	N°	Key activities	INDICATORS	Timing chart				
				2007	2008	2009	2010	2011
levels								
Integrated monitoring/evaluation	14.5	Ensure that monthly integrated monitoring is undertaken systematically (collection, analysis, use and retro information) and integrated bi-annual monitoring sessions are conducted in all health districts.	- Proportion of health districts conducting 80% integrated monthly monitoring - Proportion of districts conducting 100% integrated bi-annual monitoring					
SASDE/RED	14.6	Carry out EPI + activities: (CPN, IRA, LMD, MII, de-worming and Vit. A)	Number of health districts conducting EPI+ activities					
	14.7	Organise local social mobilisation	Meeting reports					
	14.8	Vaccinate all children aged 12 to 59 months who are not completely immunized	Coverage of children aged 12-59 months					

PROJECTION OF EPI COSTS AND FINANCE 2007-2011

5. BUDGET: COSTS AND FINANCING OF THE EXPANDED PROGRAMME ON IMMUNIZATION 2007-2011

This section of the document contains:

- an analysis of EPI costs and financing taking 2005 as the base year,
- an evaluation and projection of the costs and finance needs for the period 2007-2011.

6.1. Analysis of previous costs and financing (2005)

6.1.1 Analysis of costs

Resources allocated to EPI enabled financial needs to be covered in the following areas: recurring costs, capital costs, shared immunization campaigns and shared costs. The estimated requirements for 2005 were USD 23,191,201.

6.1.2 Analysis of finances

En 2005, the resources required to finance the cost of EPI activities were allocated by the Government and the development partners (WHO, UNICEF, GAVI, GTZ, HKI, OCEAC[16], Plan-Cameroon, ROTARY). To mobilise the required resources the various donors contributed as follows: Central and local Government: 41.2%, HIPC funds: 8.26%, WHO: 12.04%, UNICEF: 16.65%, GAVI: 19.18%, HKI: 1.76%, GTZ: 0.12%, OCEAC: 0.007%, Plan-Cameroon: 0.086%, ROTARY: 0.43%. However, it should be noted that the resources allocated by the State for EPI were substantially reduced in 2005 against those for 2004, dropping from USD 232,501.22 to USD 169,091.00

6.2. Evaluation of future resource and finance requirements (2007-2011)

Estimates of resource requirements during the period 2007-2011 take into account the introduction of new vaccines in different years: (Hemophylus Influenza b vaccine from 2008 onwards; introduction of the rotavirus vaccine is planned for 2011, however information which would facilitate an evaluation of the costs is not yet available).

To achieve its long-term objectives EPI will have to meet significant financial needs linked to the operational strategies it is developing. Implementation of these strategies will involve significant costs for the programme during the multi year action plan period 2007-2011. The overall projected costs (including shared costs in capital and staff) are USD 165, 879,455 or an average of USD 33, 175, 891 per year.

6.2.1 Vaccines and injection material

In 2005, costs for the procurement of vaccines and injection material represented 20.46% of the overall cost for EPI. In 2007, this proportion will increase to 20.51%. However, in 2008, due to the introduction of new vaccines, injection material and vaccines will represent 38.05% of the overall cost.

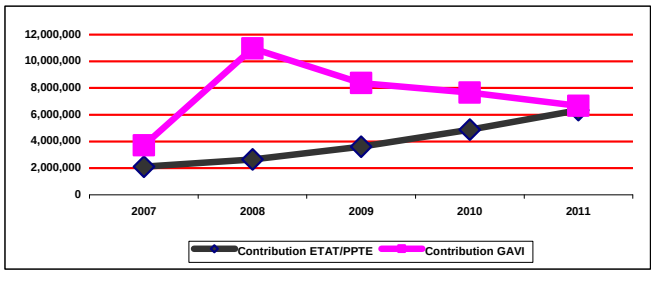
[16] Translator's Note : OCEAC = Organisation de coordination de la lutte contre les Endémies en Afrique Centrale (Organisation for the Coordination of the Control of Endemic Diseases in Central Africa)

To finance the additional costs GAVI has undertaken to supply the new vaccines and the less-used vaccines for a period of five years from their actual introduction into EPI. An outline of the co-financing arrangements (GAVI - Government) for the purchase of these vaccines is attached as an annex to this document.

Table No. 12 : Evolution of shared finances - State and GAVI - for vaccines and injection material from 2007 to 2011

	2007	2008	2009	2010	2011	Total
Yellow fever	957,575	813,142	854,979	897,964	931,781	4,455,440
% STATE/HIPC	20	30	40	50	70	
% GAVI	80	70	60	50	30	
STATE/HIPC	191,515	243,943	341,991	448,982	652,247	
GAVI	766,060	569,199	512,987	448,982	279,534	
DTC-Hep B	3,430,554					3,430,554
% STATE/HIPC	20					
% GAVI	80					
STATE/HIPC	686,111					
GAVI	2,744,443					
DTC-HepB+Hib		11,305,703	9,566,929	10,041,316	10,418,148	41,332,096
% STATE/HIPC		10	20	30	40	
% GAVI		90	80	70	60	
STATE/HIPC		1,130,570	1,913,386	3,012,395	4,167,259	
GAVI		10,175,133	7,653,543	7,028,921	6,250,889	
Injection material for new vaccines						
Cost	241,934	269,629	283,981	298,894	310,933	1,405,371
Non-reusable syringes	213,780	228,139	240,322	252,984	263,217	
Reconstitution syringe (Hib)		9,481	9,956	10,450	10,842	
Reconstitution syringe (YF)	3,686	3,884	4,084	4,289	4,451	
Safety box (5 Litres)	24,469	28,126	29,620	31,172	32,424	
STATE/HIPC	48,387	53,926	85,194	119,558	171,013	
GAVI	193,547	215,703	198,787	179,336	139,920	
Basic vaccines	898,860	918,374	945,265	978,531	1,008,758	4,749,788
BCG	172,701	174,026	171,813	173,562	173,655	
DTC	0	0	0	0	0	
Tetanus Toxoid (TT)	127,574	131,454	135,422	141,123	146,749	
measles	149,629	157,682	165,795	174,131	180,689	
Polio (VPO)	448,956	455,212	472,234	489,715	507,666	
Basic vaccine material	282,395	298,726	312,932	329,742	343,098	1,566,894
Non-reusable syringe for BCG	74,947	78,605	80,648	84,544	87,665	
Non-reusable syringes	172,598	183,449	194,052	205,083	213,852	
Reconstitution syringe (BCG)	3,414	3,440	3,397	3,431	3,433	
Reconstitution syringe (measles)	3,686	3,884	4,084	4,289	4,451	
Security box (5 Litres)	27,751	29,349	30,751	32,395	33,698	
New vaccines						
STATE/HIPC	877,626	1,374,513	2,255,377	3,461,377	4,819,506	
GAVI	3,510,503	10,744,332	8,166,530	7,477,904	6,530,423	
New vaccine material						
STATE/HIPC	48,387	53,926	85,194	119,558	171,013	
GAVI	193,547	215,703	198,787	179,336	139,920	
Basic vaccines						
STATE/HIPC	898,860	918,374	945,265	978,531	1,008,758	
GAVI	0	0	0	0	0	
Basic vaccine material						
STATE/HIPC	282,395	298,726	312,932	329,742	343,098	
GAVI	0	0	0	0	0	
TOTAL COST	5,811,318	13,605,574	11,964,085	12,546,448	13,012,718	56,940,143
New Vacc STATE/HIPC	877,626	1,374,513	2,255,377	3,461,377	4,819,506	12,788,398
New Vacc GAVI	3,510,503	10,744,332	8,166,530	7,477,904	6,530,423	36,429,692
Inj Mat. STATE/HIPC	330,782	352,652	398,126	449,300	514,111	2,044,971
Inj Mat GAVI	193,547	215,703	198,787	179,336	139,920	927,293
STATE/HIPC Contribution	2,107,268	2,645,539	3,598,768	4,889,208	6,342,375	19,583,158
GAVI Contribution	3,704,050	10,960,035	8,365,317	7,657,240	6,670,343	37,356,985

Graph No 04: Evolution of shared finances – State and GAVI – for vaccines and injection material



With regard to the procurement of traditional vaccines and injection material the State will have to finance all costs related to this in the absence of another partner.

6.2.2 Human resources

In order to conduct its activities the EPI basically uses two categories of staff – full time and part time. Those staff working in the latter category only devote part of their working hours to EPI activities.

In 2002, the restructuring of EPI resulted in an increase in the number of staff at central level. At provincial level the increase in staff was the result of new units being set up and put into operation. Staff who work part-time are mainly located in the health districts and health regions.

Estimates of staff costs are based on the percentage of working hours devoted to EPI activities by each category of staff.

6.2.3 Transport

EPI activities involve the movement of staff and the transportation of materials. For this reason it is necessary to have a sufficient number of vehicles. During the period 2007-2011 there are plans to purchase new vehicles. The new vehicles will increase the facilities available in provincial units, health districts and medical training centres, in accordance with the terms of the renewal plan.

For those zones which are inaccessible by road, 16 boats will be purchased equipped with outboard motors over the next five years. The cost of staff transportation within districts and regions is set out in the section on shared costs.

6.2.4 New purchases and maintenance of cold chain equipment

The data used to calculate equipment requirements comes from the results of an exhaustive inventory of cold chain equipment which was carried out in 2004 and updated in 2006. These results have also made it possible to draw up guidelines to be followed when planning future purchases of cold chain equipment.

In addition to maintenance costs the resources envisaged in the cold chain section will be used to purchase:

- 02 cold chambers, 04 freezers and 02 refrigerators at central level;
- 01 cold chamber, 01 freezer for each of the 10 provinces;
- 01 freezer and 01 refrigerator per health district;
- 01 refrigerator per Immunization Centre.

6.2.5 Organisation of immunization campaigns

As part of the effort to eradicate poliomyelitis and keep vaccine-preventable diseases in check (measles, yellow fever, maternal and neonatal tetanus), the following additional immunization activities are planned:

- Immunization response campaigns to counteract possible imports of polio virus between 2007 and 2011;
- Immunization campaign against measles in 2009;
- Response campaigns against yellow fever and preventive campaigns which cover an increasing number of high-risk health districts each year;
- Immunization campaigns against maternal and neonatal tetanus in 2007, 2009 and 2011;

- The provision of Vitamin A capsules is included in measles and poliomyelitis immunization campaigns and in routine EPI.

6.3 Analysis of costs, future resource requirements and finances for 2007-2011

6.3.1. Traditional vaccines

As part of the vaccine independence initiative all the traditional vaccines are purchased by the State through CENAME. Since 2002, the State has been purchasing all the traditional vaccines required through the HIPC Initiative.

6.3.2. New Vaccines

The yellow fever vaccine was introduced into the routine EPI in January 2004 and the tetravalent viral hepatitis B vaccine (DTC-HepB) in March 2005. The financing of these new vaccines will be covered in full by GAVI for a period equivalent to five years, but spread over 10 years in the table set out above.

From 2008, the paediatric bacterial meningitis vaccine and the *Haemophilus influenzae* type b pneumonia vaccine will be included in EPI. The rotavirus vaccine will be introduced as of 2011, thus the completing the set of antigens offered by EPI.

6.3.3. Finance and shortfalls

An analysis of the finances for the Expanded Programme on Immunization for the next five years exposes shortfalls in the funding.

The shortfalls in funding indicated by the multi year action plan management tool result from the difference between estimated needs and probable and assured funding.

Assured costs and funding for implementing EPI objectives in the period 2007-2011 projected in the analysis reveal a financial shortfall of USD 51, 796,315 against certain funding and USD 21, 602, 796 against certain and probable funding.

The extent to which these shortfalls can be made up will depend on the degree of commitment shown by the Government and its partners, the guarantee of a minimum amount of funding from the State and the implementation of efficient strategies to mobilise additional resources. If necessary, the objectives will be reviewed.

The making good of the financial shortfall will depend, above all else, on whether the Ministry of Public Health can maintain the momentum of EPI in the future and whether the State can mobilise resources to implement this policy. The decision by the Ministry of Public Health (N°0333/MSP/CAB dated 29 July 2002) to restructure EPI is indicative of a genuine desire on the part of the Government to keep the momentum of the programme going and achieve the objectives fixed.

The State is undertaking to increase its share of the budget to support costs in order to sustain the programme. In so doing it will respect its commitments and even mobilise additional resources. However, this will depend on whether the 5% growth in gross domestic product forecast over the next decade can be maintained.

An analysis of financing by source indicates that the State contribution will increase significantly. It will go up by 36%, from USD 5, 870,262 in 2007 to USD 9,171,309 in 2011. However, it should be noted that this increase will occur gradually over the years in accordance with the objectives set out in the financial viability strategies.

The introduction of the Hib vaccine from 2008 will considerably increase the cost of the programme. The budget for procuring the vaccine will rise from USD 5, 327,037 in 2007 to USD 13,088,337 in 2008, which is an increase of around 145%. The analysis of the financial shortfall did not take into account the costs of the rotavirus vaccine. Since the multi year action plan is dynamic and subject to adjustment, this data will be introduced as soon as possible.

For similar reasons adjustments will be made on an annual basis in order to reabsorb the financial shortfall by means of financial viability strategies and activities.