MINSANPF

REPOBLIKAN'I MADAGASIKARA

(REPUBLIC OF MADAGASCAR)

Tanindrazana – Fahafahana – Fandrosoana

MINISTRY OF HEALTH AND FAMILY PLANNING

DEPARTMENT OF FAMILY HEALTH

VACCINATION SERVICE

COMPLETE MULTI-ANNUAL EXPANDED PROGRAMME OF IMMUNISATION

2007 - 2011

March 2007

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LIST OF ACRONYMS

ACD	To Reach Each District
AVS	Additional Vaccination Services
CCIA	Inter-agency Coordination Committee
CDC	Centre of Diseases Control
CSB	Centre for Basic Health
DRSPF	Regional Department of Health and Family Planning
DSRP	Document of the Strategy for the Reduction of Poverty
DTC	Diphtheria – Tetanus – Whooping cough (vaccine)
EDS	Demographic and Health Survey
EPM	Periodic Household Survey
FAR	Women of Child Bearing Age
FFOM	Strengths, Weaknesses, Opportunities, Threats
GAVI	Global Alliance for Vaccines and Immunization
GIVS	Global Immunization Vision and Strategy
Hep B	Type B Hepatitis (vaccine)
IEC	Information, Education, Communication
IFP	Institute of Paramedical Training
INSPC	National Institute of Public and Community Health
INSTAT	National Statistics Institute
Hib	Type b Heamophilus Influenzae (infection or vaccine)
OMD	Millennium Development Objectives
OMS	World Health Organisation
MAPI	Undesirable Post-vaccinal side-effects
MLM	Middle Level Management

MSPF	Ministry of Health and Family Planning
EPI	Expanded Programme of Immunisation
PFA	Acute Flaccid Paralysis
PPAC	Complete Multi-Annual EPI Plan
PPPS	First Expired, First Out
RGPH	General Population and Housing Census
RNDH	National Report on Human Development
SAB	Self-Blocking Syringe
SISG	Health Information System for Management
SSD	District Health Service
SSME	Health Service for the Mother and Child
TCV	Rate of Vaccinal Coverage
TMN	Maternal and Neonatal Tetanus
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VAR	Anti-Measles Vaccine
VAT	Anti-Tetanus Vaccine
VDPV	Virus Derived from Polio Virus
VPO3	Oral Polio Vaccine (3rd administration)

INTRODUCTION

For decades, Madagascar has applied itself to improving the living conditions of its population, particularly mothers and the children. In 2000, while adhering to the resolution of the General Assembly of the United Nations for reaching the Millennium Development Objectives (OMD), it committed itself by 2015 to the struggle for the reduction of poverty. This commitment was strengthened by its active participation in the twenty-seventh extraordinary session of the General Assembly of the United Nations in 2002 devoted to children.

In 1976, the Government of Madagascar, in collaboration with its partners initiated the Expanded Programme of Immunisation. In addition to the routine vaccination of children of under 5 years of age against diphtheria, tetanus, whooping-cough and tuberculosis, the services was strengthened in 1982 by the introduction of anti-poliomyelitis vaccines for children and anti-tetanus vaccines for pregnant women. In 1985, the vaccination services were supplemented by the start-up of anti-measles vaccination for children, later followed by the introduction of vaccines against hepatitis B (2002).

However, according to the information in the annual reports of the Medical Statistics Service of the Ministry of Health and Family Planning and the results of the Demographic and Health Survey 2003-2004, morbidity and mortality continue to rage quite highly on the maternal-child population. As an illustration, the infant mortality rate is estimated at 58%o, the infant-child death rate remains at 94%o, and the maternal death rate is 469 per 100,000 live births. The diseases preventable by vaccination are cited as being among the first causes of morbidity and of infant and maternal mortality.

In order to reinforce and optimize the effects of vaccination on child survival and other target, the World Health Organization and UNICEF jointly conceived the project "Global Immunization Vision and Strategy" for the period 2006-2015, which aims at maintaining vaccinal coverage at its current rate (or to increase it), to put vaccination services within reach of those who do not currently benefit from them and for age groups other than infants, to adopt new vaccines and new technologies, and in general to combine vaccination with other medical measures and with the development of the medical sector[1]. This concept of vaccination will require the strengthening of the monitoring of the diseases targeted by the Expanded Programme of Immunisation (EPI), of the follow-up and assessment of the vaccination programme, as well as a management orientated towards the quality of the programme based on solid and reliable data.

This new vision of vaccination is judged to be the approach best adapted to the situation of the Republic of Madagascar and which formed an integral part of its Development Plan for the Medical Sub-Sector 2007 – 2012, whose implementation involves the existence of an adequate action plan in the field of vaccination.

Among the national objectives that Madagascar assigned itself in order to reach the of the Millennium Development objectives, in its Strategy Document for the Reduction of Poverty[2], there appear those relating to the promotion of the survival of the mother and the

[1] WHO/UNICEF, Fifty-eighth World Health Assembly, A58/12, 28 April 2005.
[2] DSRP, version July 2003 and updated version, 2005.

child. In particular, they relate to the reduction of the infant-juvenile death rate (OMD no. 4) by 2/3 and the maternal death rate (OMD no. 5) by 3/4 compared to their 1990 level, by the complete vaccination of children less than one year old, that is coverage of at least 90% at the national level and at least 80% in all the health districts (WHA 53.12). These objectives are also set out in the Madagascar Action Plan (2007-2012) in terms of commitment (Commitment 5: Health, family planning and the combat against HIV/AIDS) and challenges (challenge 5: to reduce infant-juvenile mortality and challenge 6: to reduce maternal and neonatal mortality)[3].

This programme, in accordance with the vision for the African Region [4] aims at improving children's health through the fight against vaccine-preventable diseases and more particularly by the eradication of poliomyelitis, the control of measles, the elimination of neonatal tetanus, all within the context of strengthening the health system. The vaccination services and monitoring the diseases targeted cover the entire extent of the country.

Indeed, for the African Region, the objectives of the EPI for the period 2006-2009 result from its strategic plan to accelerate efforts for the eradication of poliomyelitis, the control/elimination of measles, the elimination of neonatal tetanus and the control of yellow fever, as well as the introduction of new vaccines and new technologies appropriate to the national vaccination programmes[5]. It will specifically act:

- in terms of routine vaccination, to increase the coverage in DTC3 to 90% at the national level and to 80% in all the health districts in 80% of the countries of the region
- for the monitoring of diseases targeted by the EPI, to eliminate cases of acute flaccid paralysis due to the poliomyelitis virus, to reduce cases of measles by 90%, cases of yellow fever by 80%, to eliminate maternal and neonatal tetanus in 80% of the countries of the region
- to integrate vaccination services with child survival measures in 80% of the countries of the region
- in the field of the support for the EPI system, to equitably use self-blocking syringes or safety syringes in all the countries of the regions
- to introduce the vaccine against hepatitis B in all countries and the vaccine against type B haemophilus influenzae in 80% of the countries of the region.

This document represents the Complete Multi-annual Plan of the Expanded Programme of Immunisation for the period 2007 – 2011 and has been developed in collaboration with the various Ministries of the Government, in particular the Ministry for Health and Family Planning, the Ministry of the Economy, Finance and the Budget, with the support of several partners, in the circumstances, UNICEF, WHO, Santénet / USAID, BASICS, etc. Given its multidimensional vision and its long lifespan, the development of this plan will facilitate the adequate coordination and integrated execution of vaccination activities as one of the paramount measures for the general development of the country. Its implementation will surely guarantee not only the increase in the performance of the Expanded Programme of Immunisation, but also the development and sustainability of other health programmes, particularly those that focus on the improvement of the health of the mother and child survival. The problems due to the existence of numerous action plans and especially to the

[3] MAP, pp 25 – 78 - 79
[4] DDC, WHO/AFRO, Vision and Objectives 2001-2005, http:///www.afro.who.int/ddc/vpd/index.html.
[5] WHO Regional Office for Africa, Strategic Plan 2006-2009, 14th TFI Meeting and 13th ARICC Meeting, Maputo, WHO/AFRO, 27-29 November 2006

disparities in content between the strategic plans of the global development of the country and those of numerous circumstantial action plans of the Expanded Programme of Immunisation will be solved by its alignment in the Madagascar Action Plan (MAP) and the Development Plan for the Health Sector.

CONTEXT AND JUSTIFICATION

Madagascar, one of the with a surface area of 581,041 km² is located in the southern hemisphere, in the Indian Ocean and is separated from Africa by the Mozambique Channel on its West coast. Administratively, it is subdivided into six provinces, 22 areas, 111 districts, 1557 communes and 17222 fokontany. With an annual rate of growth in 2.8%[6], the population was estimated in 2005 at 18,405,134 inhabitants, of which 3.53% represent children less than 12 months old, 18% children under 5 years old, 48% under 15 and the 23.4% women of child bearing age.[7]. Considered to be a rich country in terms of biodiversity (80% of its species are native), Madagascar paradoxically remains among the poorest countries in the world economically, with 72.1% of the population living on less than one dollar per day in 2004 against 69.6% in 2001[8], mostly affecting households in rural areas. According to the 2002 human development index, the country occupied the 147th rank among the 173 poorest countries in the world.[9]

Mortality in children less than 5 years old still shows an enormous disparity depending on the living conditions of families (142% of infant-juvenile mortality in the poorest households against 50% in the richest households) or the place of residence (120% in rural areas against 73% in the urban environment). Diseases that are vaccine-preventable such as measles, poliomyelitis, tetanus, whooping-cough, diphtheria, tuberculosis, hepatitis B and the Haemophilus Influenzae etc. play a significant role in their occurrence. This is related inter alia to the weak rates of vaccinal coverage (53% of children were completely vaccinated in 2003-2004) and the late introduction or the non-introduction of new vaccines such as those against hepatitis B and the Influenzae Haemophilus in routine EPI. Between 2002 and 2003, according to routine data, the rates of coverage in DTC Hep B3 had passed from 62% to 87%, those of the VPO3 from 61% to 86%, while the rates of coverage in VARs were about 61% then 86%. In terms of deaths attributable to measles, only complicated cases of measles seen in hospitals (District Hospital complexes, Hospital complexes of reference at the regional level) increased, with mortality rates going from 4.85% in 2000 to 9% in 2004[10]. However, several studies showed that a complete vaccinal coverage supplements of 80% of all children before their first birthday would allow a reduction up to 25% in the infant-juvenile death rate.

The health system, of a pyramidal structure and incorporating the country's decentralized administrative division comprises, at the central level, the central Department and central services of the Ministry of Health and Family Planning; at the intermediate level the 22 regional health and family planning or DRSPF Departments, 6 University Hospital complexes, 22 Regional Hospital complexes of reference, 140 District Hospital complexes of reference including 106 public CHD and 55 CHD2; and at the peripheral level 111 health districts or District Health services, representing the operational unit of the national health system and including 3026 public and private health formations[11]. With regard to accessibility at the service points of first contact, according to the EDS data of 2003-2004, 2 women out of five (41%) among those surveyed do not have access to healthcare because of

[6] Estimate from the General Census of Population and Housing, INSTAT, 1993.
[7] Estimate according to the Demographic and Health Survey, INSTAT/Macro ORC, 2003-2004.
[8] EPM, 2001, 2004
[9] RNDH, 2002.
[10] MSPF/UNICEF, Statistical Yearbook for the Health Sector, 2000, 2004.
[11] MSPF, SISG, 2005

distance from health centres, and the problem affects those living in rural areas (45%) more than those in an urban environment (29%).

In the field of the health of mother and child, the expanded programme of immunisation in Madagascar had as objectives:

- to eradicate poliomyelitis by 2005
- to increase vaccinal coverage to at least 80% for all the EPI antigens in children less than one year old (0 to 11 months) by 2006
- to increase vaccinal coverage to at least 80% for anti-tetanus vaccination among pregnant women by 2006
- to control measles by 2008, and
- to eliminate maternal and neonatal tetanus by 2010.

For the period 2005-2007, as a corollary to the programmes retained within the framework of the medium-term expenditure of the health sector (CDMT) for the same period, the General Policy of the State and the new National Health Policy, the Ministry of Health and Family Planning defined among the seven priorities of the health programme[12] :

- to increase access to health services by the extension of the coverage of the populations served; the availability of drugs and other consumable and the implementation of complementary actions, such hygiene and sanitation
- to improve the health of the mother and child by strengthening of measures such as maternity without risk, vaccination and school health
- to fight against transmissible diseases especially endemoepidemic diseases, sexually transmissible infections and AIDS.

Progress has certainly been made, through various strategies orientated towards the quality and performance of the vaccination programme, even though evolving in an unstable environment of which the most unfavourable development was the political crisis of 2002. We can quote inter alia,

- in terms of the planning and management of vaccination activities: the development and application of the new EPI Policy (1998)[13], the installation and functionality of the CCIA (2000), the availability and use of the Annual Work Plan integrated at all levels of the health system, the strengthening and use of the management information system (SIG) computerized at the national, regional (18 regions) and peripheral (111 SSD) levels, the regular management of the completeness and promptness of operational reports and losses of vaccines, the availability of the system for the declaration of undesirable post-vaccinal side-effects (MAPI), the availability of a purchasing plan for vaccines and equipment and the plan for the refurbishment of the cold chain at the national level, the availability of a national policy for waste management and safety of injections (the implementation of which will be done in collaboration with the Health and Sanitation Service of the Ministry of Health and Family Planning) and the guide for the monitoring of the diseases targeted by the EPI,
- in the field of the provision of services: the integration of vaccination activities into the minimum package of activities of basic health centres or CSB (1990), the realization of the plan for relaunching the EPI (2003-2004), the implementation of the strategy "To Reach Each District" or ACD in health districts for the strengthening of routine EPI within the framework of the execution of the plan for strengthening the EPI 2003-2005 (76% of them), the strengthening of the

[12] MSPF, Framework of Medium Term Expenses, 2006 – 2008.
[13] MSPF, Plan of Financial Viability of the EPI, Madagascar, March 2004.

competencies of the personnel responsible for the EPI in management (Middle Level Management or MLM) at all levels of the health system and the introduction of the course into the training modules of public health institutes and paramedical training (INSPC, IFP, Faculties of Medicine) [14], the installation and strengthening of epidemiologic monitoring systems of the diseases targeted by the EPI, the existence of a national communication plan and the organization of IEC meetings at the CSB and in the communities

- Concerning the EPI logistics: the availability and correct application of the procurement plan for vaccines and vaccination equipment (thinners, dropper, injection equipment) at the national level [15], the control of the storage system and the bottle policy initiated, the conservation capacity of vaccines and freezing of accumulators, the correct follow-up of vaccine losses at all levels of the health system. In 2005, the effective coverage in the cold chain in the provision of services at all levels reached 75% with sufficient storage volume and conservation capacity, while the principles of storing and classifying vaccines have been observed (First Expired, First Out), with no out of stock situation in vaccines being noted and the safety of injections improved by the exclusive use of new technologies (Self-Blocking Syringe, Safety Box) in all the CSB. In addition, the computerized database is operational and makes it possible to have information on the inventory status of vaccines and thinners according to arrivals and deliveries at the periphery and minimum and maximum stock levels. The use of purchase and delivery orders is required. The external review of the EPI in Madagascar carried out in August 2006 reported, among its recommendations, *in the field of the management of vaccines, the progress recorded is significant particularly at the central level, compared to the 2005 assessment* [16]
- in terms of the financing of the programme: the increase in Government participation in the purchase of vaccines, which rose to 359,305 USD in 2005, represented 13% of the total cost of vaccines excluding new vaccines and those intended for campaigns, with a projection of progression of the State contribution passing to 25% of total expenditure on vaccines in 2011, including its participation in the purchase of new vaccines, that is an average annual increase of 2 percentage points.[17]

Concerning the performance of the programme, from the 1990s until 2001, complete vaccinal coverage in children from 12 to 23 months moved lower. In the aftermath of the political crisis which raged in the country in 2002 and which had negative effects on the health of the population, the revival of the vaccination programme was more than dynamic. The Government made subsequent investments in human and financial resources to organize national campaigns to strengthen vaccinal coverage against poliomyelitis in 2002, against measles in 2004 (HIAKA), the introduction of a new vaccine in 2002 (anti-hepatitis B vaccine). The campaign carried out to control measles was able to cover 95% of the population from 9 months to 14 years of age in 111 medical districts.

[14] Republic of Madagascar/MSPF, Strategic Plan for Child Survival 2006-2010 – Workshop for the preparation of the complete multi- annual plan 2007-2011, Analysis FFOM, Vah'iny, September 2006.
[15] Republic of Madagascar/MSPF, Strategic Plan for Child Survival 2006-2010
[16] MSPF, DSF/SV, Annual Operating Report, 2005 – External Review of the EPI, Madagascar, provisional report, August 2006.
[17] MSPF, Plan of Financial Viability, 2003 – 2013.

In 2005, a vaccination campaign against poliomyelitis was carried out at the level of 27 targeted districts of the province of Toliara after the discovery in the aforementioned districts of cases of viruses derived from the poliovirus or VDPV. During the same period, the approach "Relaunch EPI 100 days" gave a satisfactory result on the vaccinal coverage in DTC HepB3 which was about 92%. For maternal and neonatal tetanus, additional vaccination measures (AVS) for women of child-bearing age (FAR) in 19 classified high-risk districts of priority 1 were carried out in 2005 and 2006 according to the WHO protocol on the administration of vaccines. Thus, at the time of the three passages between October 2005 and June 2006, the vaccination of 70% of women of child-bearing age was carried out during the first passage, 74% at the time of the second passage and 78% of the during the third passage[18], that is in total, a rate of protection of 75% for the women[19]. In 2007, 23 high-risk districts of priority 2 will be the subject of the same programme. Thus the maintenance of a high rate of vaccinal coverage against poliomyelitis and measles in children and against maternal and infantile tetanus, the strengthening of the monitoring system in new cases of acute flaccid paralysis, and cases of measles and tetanus prove to be paramount in order to make it possible for the country to meet the global objectives to which it has subscribed (eradication of poliomyelitis, control of measles, and elimination of maternal and neonatal tetanus).

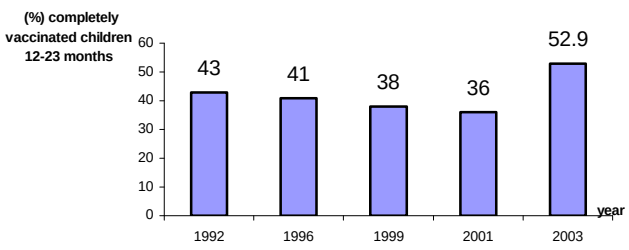

Figure 1: Evolution of complete vaccinal coverage of children from 12 to 23 months in Madagascar from 1992 to 2003

Source : MSPF, Plan of Financial Viability

With respect to the epidemiologic monitoring of the EPI priority diseases, the national committees of containment, of experts, or again of certification are operational and a monitoring plan is available at all levels of the health system of. In the field of monitoring cases of PFA, a laboratory accredited for the biological monitoring of cases of PFA and suspected cases of measles is operational at the national level, at the level of the Pasteur Institute of Madagascar. The report on the quarterly review of vaccination activities in 2006 mentions the notification of 90 suspected cases of measles against 460 suspected cases in 2005[20] , and no cases of measles were detected in all the suspected cases biologically examined. In addition, 93 cases of non polio PFA out of 105 were detected against 167 cases in 2005, that is to say a rate of 0.6 per 100,000 children of less than five years of age (August 2006) against 1.8% in 2005[21]. Within the framework of the elimination of maternal and neonatal tetanus, no district has reported more than one case for 1000 live births since 2002. In 2005, 17 notifications of cases of tetanus were reported by the 19 high-risk districts of priority 1 after two passages of AVS.

Performance monitoring indicators in cases of PFA in 2005

- Samples taken within 14 days: 83%
- Case investigated within 48 hours: 91%.
- Samples sent off within 72 hours: 81%
- Adequate samples: 85%

[18] MSPF, DSF/SV, Report on the AVS for the elimination of TMN, October – November 2005
[19] Women having received VAT 2 + according to the data in their health books.
[20] The 460 suspected cases were notified by 12% of health districts.
[21] MSPF, DSF/SV, Annual Operating Report, 2005 – Report of the quarterly EPI review, Hotel Panorama, April 2006.

However, considerable efforts still remain to be made to have an effective vaccination programme. Indeed, the results obtained as regards vaccination or epidemiologic monitoring of the EPI priority diseases deserve to be reinforced. The requirements cited inter alia include:

- strengthening of the system of follow-up and assessment of the management of vaccination services, including strengthening the management capacities of managers and personnel allocated to the vaccination services (strategic plan for child survival, OS 2), formative supervision, active monitoring of the diseases targeted by the EPI based on performance, the exploitation and use of data, the follow-up of purchases and distribution of vaccines, inventory control of vaccines and input, the plan for the maintenance and refurbishment of the cold chain and the waste management plan [22]
- improvement in the mobilization, allocation and financial distribution of resources and equipment according to the needs for the provision of services at various levels
- increase in access to routine vaccination services of quality, orientated towards marginalized populations or those living in enclosed zones and to the active search for target populations lost to view (mobile and advanced strategies), and integrated with the activities of child survival (catching-up)
- involvement of communities (strategic plan for child survival, OS 3), NGOs and the civil society in the operations of the decentralized health system for the promotion of vaccination measures and the effectiveness of their active participation in the active monitoring of the EPI priority diseases, within the framework of the promotion of integrated health activities (application of contractualisation).

The programme therefore has to: ensure the adequacy of the vaccination services to meet the needs of vulnerable populations; strengthen access to routine vaccination services by all populations, in particular those living in enclosed zones and underprivileged groups.

It should moreover guarantee the regular supply of vaccines, the safety of injections, the availability and functionality of the cold chain; initiate measures of improvement in the mobilization, distribution and use of resources; improve the quality of the data on vaccination and epidemiologic monitoring of the diseases and their use for decision-making and actions.

	Central	DRSPF	SSD	CSB	**Total**
Cold boxes	6	136	0	0	**142**
Refrigerators /freezers SIBIR V170KE	0	124	0	1601	**1725**
Refrigerators /freezers SIBIR V240KE	6	0	289	121	**416**
Refrigerators /freezers Vestafrost			2	986	**988**
Refrigerators /freezers Zero (electric)	0	0	29	0	**29**
Vaccine carrier	0	0	0	63	**63**
Large Vaccine Carrier (G)	0	0	0	450	**450**
Large Vaccine Carrier (H)	0	0	0	1729	**1729**

[22] MSPF, DSF/SV, Annual Operating Report, 2005 – Report of the quarterly EPI review, Hotel Panorama, April 2006..

In addition, this programme should envisage strengthening the health system in the management of the vaccination programme (training, formative monitoring, follow-up and assessment) and in the integration of this latter with other health services for the improvement of the quality and performance of services and their sustainability; as well as increasing community participation in the promotion of vaccination and the monitoring of diseases targeted by the EPI.

A solid partnership is established between the Ministry of Health and Family Planning and the international agencies in support of medical development, in the circumstances, USAID (Santénet, BASICS), UNICEF, WHO, JICA, the World Bank, Rotary International, GAVI, the Pasteur Institute of Madagascar, the Centre for Disease Control Atlanta, etc. with the aim of contributing to the wellbeing of Malagasy children by the reduction of the mortality rate of these latter. The support of the Global Alliance for Vaccines and Immunizations or GAVI was and remains an opportunity to strengthen vaccination strategies, as well as the introduction of new vaccines, such as anti-hepatitis B vaccines, against Haemophilus influenzae B, the integration of vaccination measures within the other services for the health of the mother and child, the strengthening of the health system and the decentralization of the Inter-Agencies Coordinating Committee or CCIA at the level of the regions.

ASSESSMENT OF INDICATORS FOR DISEASES TARGETED BY THE EPI

Table 1: Distribution of indicators by accelerated disease control initiatives, on the basis of data from previous years

Components of vaccination	Indicators	National (JRF /GAVI revised)			
		2002	2003	2004	2005
Eradication of Poliomyelitis	Coverage by VPO3	60,8%	85,8%	79,3%	87,4%
	Rate of non-polio PFA for 100,000 children less than 15 years old	0,8	1,9	1,5	1,8
	Extent: National Vaccination Days/ Local Vaccination Days	JNV 2/an 109 % and 116%			JNV 2/year 107,3% and 103,9%
Elimination of Maternal and neonatal tetanus	Coverage by VAT2 and plus	34,8%	49,1%	54,3%	47,1 %
	Number of districts notifying more than one case per 1000 live births	0	0	0	0
	Number of outbreaks notified				17
	Are there additional vaccination activities? (Yes/No)	N	N	N	O (2/year) 68% and 73,7%
Control of measles	Coverage of measles	61,4%	85,9%	98,1%	83,8%
	Number of epidemics reported	0	0	0	0
	Number of suspected cases notified				460
	Proportion of districts notifying suspected cases of measles				12%
	Extent: National Vaccination Day/ Anti Measles Vaccine Age group Coverage			HIAKA 9 months to end of 15 years 99%	

Sources :WHO/ UNICEF, Joint forms, 2002, 2003, 2004, 2005.

Table 2: Analysis of the routine EPI situation by components of the system on the basis of data from previous years

Components of the system	Indicators	National (JRF/GAVI revised)			
		2002	2003	2004	2005
Routine coverage	Coverage by DTC3	62,0%	86,9%	74,8 %	92,2%
	% of districts with > or = 80% coverage	22,5%	34,2%	40,5%	67,6%
	National rate of abandonment DTC1-DTC3 >10%	18%	12%	13%	0 % (relaunch active EPI research)
	Percentage of districts having a rate of abandonment of DTC1-DTC3>10%	12%	34%	68%	40%
New vaccines	Coverage Hep B3 (cf DTC)	62,0%	86,9%	74,8%	92,2%
Routine monitoring	% of monitoring reports received at national level from districts against number of reports expected	ND	45%	57%	42%
Cold chain, logistics	Percentage of districts having a sufficient number of operational cold chain equipment		73%	80%	92%
Safety of the vaccination	Percentage of districts having received a sufficient number (equal to or greater) of self-blocking syringes for all routine vaccinations	88%	92%	83%	95%
Supply of vaccines	Has there been an out-of-stock situation at the national level during the past year?	Yes	No	No	No
	If so, specify the duration	1 months			
	If so, specify which antigens	VPO BCG			
Loss of vaccines		DTC :13,8%	DTC :12%	VPO : 14% DTCHepB :11% BCG : 42% VAR : 18% VAT : 36%	DTC: 10,5%
Waste disposal	Existence of a waste management plan: Y/N			O	O

Sources :WHO/ UNICEF, Joint forms, 2002, 2003, 2004, 2005.

Components of the system	Indicators	National (JRF/GAVI revised)			
		2002	2003	2004	2005
Communication	Existence of a plan	O	O	O	O
Financial sustainability	What percentage of the total costs of routine vaccines has been financed by public funds (including loans and excluding external public financing	2, 6%	12,26%	0% (to be taken up in 2005 due to the freeze on credit)	91% (for 2004 and 2005)
Links with other health services	Vaccination services have been systematically linked to the provision of other established services (malaria, nutrition, children's health)	No	No Yes for children's health (PCIME)	No Yes for children's health and for supplementing with vitamin A	No Yes for children's health and for supplementing with vitamin A
Availability of human resources	Number of health workers/vaccinators for 10,000 inhabitants			2	2
Management planning	Is a series of district indicators regularly received at the national level (Y/N)	O	O	O	O
NRA	Number of operations carried out				
Research/studies	Number of studies linked to vaccines carried out / in progress			none	none

Sources :WHO/ UNICEF, Joint forms, 2002, 2003, 2004, 2005.

KEY RECOMMENDATIONS OF PREVIOUS ASSESSMENTS, STUDIES AND ESTIMATES

Title and year	Principal recommendations	Objectives required for the new plan
2005: Vaccine Management Assessment or VMA in Madagascar	- Strengthening the management and monitoring of stocks. - Monitoring purchases and distribution. - Reliability of the cold chain. - Update of vaccine stock cards. - Adoption of a clear procedure for the storage of vaccines and consumables.	- To carry out a periodic VMA (every 2 years) - To prepare a handbook for logistics management at all the levels. - To improve the use of the computerized data management tool. - To set up a periodic system of materials maintenance. - To set up a system for monitoring stocks of vaccines and input.

Title and year	Principal recommendations	Objectives required for the new plan
2005 : Quality control of vaccination data in Madagascar, 2004	- Introduction of a standardized checking sheet. - Standardization of the denominators at the national and peripheral levels and introduction of the use of the denominator recommended by WHO. - Accounting for the EPI data of the CHD and CHR in the district reporting system. - Permanent provisioning of lower levels in EPI supports.	- To supply peripheral centres with standard management tools. - To use the denominator recommended by WHO (surviving children). - To integrate CHR and CHD data in the districts reports. - To ensure the availability of EPI supports at the peripheral level.

Title and year	Principal recommendations	Objectives required for the new plan
2005 : Assessment of the ACD approach	- Maintenance of the continuous mobilization of funds. - Facilitate the sharing of information and experiences between the more efficient districts in ACD with the least efficient. - Strengthening support and formative supervision in planning, analysis of the data and decision-making. - Effective use of the data to carry out changes programmatic changes. - Improvement of the mechanism for identifying children lost to view. - Strengthening the capacity for the formative monitoring of health workers at district level. - Integration of the five components of the ACD approach in the monitoring grids. - Planning of the SA in conjunction with the community and better targeting of those lost to view and populations that are difficult to reach in the planning and implementation. - Improvement of community involvement in the planning of services.	- To send requests to the partners. - To carry out formative monitoring and exchanges between the SSD during the periodic reviews. - To train managers in the use of the management tools and the MLM (curve, checking sheet.). - To set up central pools of supervisors. - To strengthen active research by motivators (ACD approach) - To revise the integrated monitoring grille. - To train managers and personnel assigned to vaccination services and introduce the ACD approach ACD in all the health districts. - To introduce the approach by "PAIRS" during the relaunch of the EPI. - To plead with the local authorities for an effective community participation in the management and implementation of the vaccination services.

Title and year	Principal recommendations	Objectives required for the new plan
2006 : External review of the EPI in Madagascar	- Development of a Complete Multi-annual Plan. - Involvement of NGOs and other partners in routine vaccination activities. - Improvement in the allocation of resources. - Effective use of data to carry out changes and programmatic improvements at all levels. - Strengthening the capacity for the formative monitoring and integration of health workers at district level. - Capitalization of best practices in the approach by "pairs". - Improvement of community involvement in the planning of services. - Improvement of the effective cold chain coverage at all levels. - Rational and balanced use of financial resources according to the priorities of the vaccination activities.	- To seek external support from the partners. - To strengthen the active participation of NGOs and local actors in social mobilization, the active search for those lost to view and the monitoring of diseases. - To ensure a rational and prioritized use of the funds allocated to vaccination. - To train health workers in MLM and to ensure quality management of activities and input on the basis of the analysis of the data collected. - To train regional managers in formative monitoring and to put on the scale the ACD approach in all health districts. - To document the results of the approach in efficient districts in order to replicate them in the least efficient. - To develop community participation in the management of the health system to increase the vaccinal coverage and improve the active monitoring of diseases. - To set up an effective system for the supply of vaccines, spare parts and oil at the SSD and CSB levels. - To ensure the unfreezing of the operating funds allocated by the State in time for the implementation of the activities on the ground.

OPPORTUNITIES

The future expansion of the EPI benefits from several opportunities, namely:

- The multiplication of global initiatives for the support, re-energizing and strengthening of vaccination programmes, through alliances and synergies of actions, such as the initiative of Global Alliance for Vaccines and Immunization (GAVI) with the Global Fund for Vaccination with the aim of stopping the decline and developing the vaccinal coverage of children in developing countries; or again the joint project of a global vaccination strategy conceived by the WHO and UNICEF as "Global Immunization Vision and Strategy" for 2006-2015 (GIVS);
- The political commitment to public health in general and the EPI in particular at the highest level in the country, seen in terms of the priority projects and activities in the Madagascar Action Plan (commitment no. 5) for the reduction of infant-juvenile mortality in the country, by 2012; the effective participation of the Government in the implementation of the EPI programme such as the purchase of vaccines. and oil for the operation of the cold chain (Plan of Financial Viability 2003-2013; Tally of the Medium-term Expenditure 2006-2008, Plan for the Development of the Health Sector 2007-2012); the installation at the national level of a policy for the recovery of costs in the health system within the framework of the financial participation of users;
- The existence of a political environment favourable to the implementation of vaccination programmes of quality and wide impact, in particular: the decentralization of the health system at the level of health regions and districts for a better follow-up of the achievement of activities and the rationalization of the use of resources, the availability of policy documents for the management of vaccination programmes (national EPI policy, national policy on the safety of injections and waste management, etc.) the operating of a structure of dialogue on the EPI at the national level (CCIA) between the partners in health development and the Ministry of Health and Family Planning;
- The adoption of efficient and quality implementation strategies: the experimental approach "To Reach Each District" and its potential to be extended to the whole country, the promotion of the "Kaominina Mendrika" approach where one of the major criterion for becoming a "champion" is raised vaccinal coverage; the availability of qualified human resources for the provision of services and the quality epidemiologic monitoring of diseases targeted by the EPI at all levels, the effective cold chain coverage at national, regional and district levels, the involvement of basic communities in social mobilization activities (actors and community agents, NGOs) for the improvement of vaccinal coverage in difficult to access zones (mobile strategies, advanced strategies, active quality monitoring, additional vaccination measures).

The plan for strengthening the health sector or RSS to be developed later has to determine and specify the requirements for the global improvement of the system, which will largely benefit the vaccination programme. Among other points to appear are: the requirements of human resources in professional development, including the system of motivation and the criteria of performance and career management; in additional or replacement material resources, in infrastructures and equipment, etc.

OBJECTIVES FOR THE PERIOD 2007 - 2011

4.

On the basis of the analysis of the situation including the data available and assessments of the programme for 2005 and 2006, the objectives, as well as the related strategies take particular account of the following principles: non-discrimination, fairness, reaching the population that has difficulty accessing vaccination and primary healthcare services, quality assurance and the safety of products and services, integration with other health services, the quality management of the vaccination programme at all levels, the long term independence of the Expanded Programme of Immunization, solidarity and the participation of the community in the implementation of the programme (local response). Within this framework, they aim to contribute to reaching the global objectives of coverage for groups vulnerable to vaccine-preventable diseases.

Madagascar has set the following general objectives[23] to be achieved by 2011:

1. To improve the vaccinal coverage and protection of the population against vaccine-preventable diseases.
2. To guarantee access to quality vaccines at the national level while ensuring the safety of injections and waste management according to the norms.

These general objectives are expressed in terms of indicators of effects and impacts and are presented in the tables hereinafter:

[23] Workshop for the preparation of the complete multi- annual plan 2007-2011, Vah'iny, 15 September 2006

Table 3: Global goals, regional goals, national objectives, expected results and benchmarks

Global goals	Regional goals	National objectives on the basis of global and regional goals	Benchmarks
Coverage: 1. By 2010, every country should have routine vaccination coverage of 90% at the national level with at least 80% coverage in each district.	By 2009, to increase coverage in DTC3 to 90% at the national level and to 80% in all the health districts in 80% of the countries in the region.	- By 2011, 100% of districts should have coverage in DTCHépB3 > or= 80% - By 2011, to reach national coverage of 95% in DTCHépB3	**% of districts reaching a DTC3 coverage > or = 80%:** 2007 : 70 % 2008 : 80% 2009 : 90% 2010 : 100% **TCV national DTCHepB3 :** 2007 : 92% 2008 : 92% 2009 - 2011 : 95%
Polio: 2. By 2005, the world will be certified free of poliomyelitis.	By 2009, to eliminate cases of acute flaccid paralysis dues to the poliomyelitis virus in 80% of the countries in the region.	- By 2007, to stop the transmission of poliomyelitis - By 2011, to reach a national TCV in VPO3 of at least 95%	**Rate of non polio PFA** 2007 – 2011 : > or =2 **National TCV VPO3** : 2007 : 92% 2008 : 92% 2009 - 2011 : 95%

Measles : 3. By 2010, 90% reduction in infant mortality compared with 2000	By 2009, to reduce by 90% cases of measles in 80% of the countries in the region.	- By 2011, to reduce by 95% hospital mortality due to measles complications compared with its 2000 rate (4.85% = 48.5/1000)	**Rate of hospital mortality due to measles :** 2007 - 2011 : 0,24% (=2,4/1000) **National TCV VAR :** 2007 - 2011 : 90%
TMN : 4. By 2005, elimination in each district	By 2009, to eliminate maternal and neonatal tetanus in 80% of the countries in the region.	- By 2010, to eliminate TMN - By 2009, to reach a TCV VAT 2 + to at least 80% of pregnant women.	**TCV VAT2+ (pregnant women):** 2007 : 70% 2008 : 75% from 2009 : 80%
Hib 5. By 2008, every country having sufficient systems of service provision should have introduced the vaccine against Hib	By 2009, to introduce the vaccines Hep B and Hib in 80% of the countries in the region.	By 2008, to introduce the Hib By 2011, to reach a national coverage of 95% in Hib	**National TCV in Hib :** 2008 : 92% 2009 - 2011 : 95%
Safety 6. By end 2003, every country will only use self-blocking syringes for vaccination	By 2009, to fairly use self-blocking syringes or safety syringes in all the countries in the region..	Maintain the EXCLUSIVE use of self-blocking syringes	**Rate of use of SAB :** 2007-2011 : 100% use of SAB for vaccination

STRATEGIC PRIORITIES 2007-2011

In order to achieve these general objectives, in accordance with the analysis of the situation of the implementation of EPI in Madagascar, priorities have been developed which are translated into strategic lines and are presented in table no. 4:

1. Generalization of the implementation of the ACD approach
2. Improvement in the availability of human resources qualified in EPI
3. Integration of the vaccination services with other health services
4. Permanent availability of vaccines
5. Strengthening of the monitoring of diseases targeted by EPI
6. Representations and communication for vaccination
7. Functionality of the cold chain
8. Improvement in the quality of data at the regional and district levels
9. Introduction of new vaccines
10. Financial sustainability of the programme
11. Strengthening the safety of injections and waste management according to the norms

Table 4 : National priorities, national objectives, benchmarks and order of priority

Description of national priorities	National objectives on the basis of national priorities	Benchmarks	Order of priority
1. Generalization of the implementation of the ACD approach	- By 2008, implement ACD strategies at the level of all districts	**% of districts implementing the ACD approach:** 2007 : 75% of districts 2008 : 100% of districts	**1**
2. Improvement in the availability of human resources qualified in EPI	- By 2008, provide all regions and districts with EPI managers and focal monitoring points	2007 : 50% of regions and districts having EPI managers (EPI/maintenance/monitoring) 2008 : 100% of regions and districts having EPI managers (EPI/maintenance/monitoring) 2009-2011 : 100% of EPI managers at all levels	**2**

3. Integration of the vaccination services with other health services	- By 2007, systematically to administer vitamin A (twice/year) - By 2007, to distribute un Insecticide Impregnated Mosquito net to completely vaccinated children before 1 year (plus pregnant women CPN 1+) - By 2007, vaccinal catch-up of children outside PCIME	2007 : To develop the integration of vitamin A into the vaccination with the collaboration of the Nutrition Service Maintain a rate > or = 90% of children receiving Vit A (6 months to 59 months) 2007 : To develop a distribution plan with the Service for the control of malaria (endemic zone) Number of MID/MII distributed 2007 : implementation of the strategic plan for child survival	**2**
4. Permanent availability of vaccines	- To periodically supply the FS in vaccines	2007 : 90% of FS without out-of-stock situations 2011 : 100% of FS without out-of-stock situations	**1**
5. Strengthening the monitoring of diseases targeted by EPI	- To continue the active monitoring of the PFA - By 2011, to develop the community monitoring of Neonatal Tetanus (TNN) - By 2011, to continue the active monitoring of measles	2007 : Rate of non polio PFA > or =2 **% of districts having made community monitoring reports of TNN :** 2007 : 25% (42 districts at risk in 2005-2006) 2008 : 50% 2009 : 75% 2010 – 2011 : 90% 2007-2011 : 100% of districts having notified and sent suspected cases of measles to the IPM	**2**
6. Representations and communication for vaccination	- To implement the new plan developed in 2006	**% of regions having functional CC:** 2007 : 75% 2008 : 85% 2009 : 100% **% SSD having a functional community structure:** 2007 : 50% 2008 : 75% 2009 : 100%	**3**

7. Functionality of the cold chain	- By 2011, refurbish the cold chain to at least 90% - By 2011, maintain and support the cold chain	**Rate of effective coverage in cold chain** 2007 : 80% 2008 : 85% 2009 : 90% 2010 - 2011 : 95% **Rate of functional cold chain** 2007 : 90% 2008 : 92% 2009 : 95% 2010 : 97% 2011 : 100%	**3**
8. Improvement in the quality of data at regional and district levels	- By 2007, set up an EPI data management system at all regional and districts levels	2007 : - set up computerized tool at the level of 100% of regions - availability of management tools at the level of 100% of districts	**2**
9. Introduction of new vaccines	- By 2008, to introduce the Hib vaccine	2008 : 100% of districts introducing the Hib	**3**
10. Financial sustainability	- To increase the national financing of vaccines by at least 10% a year	2007 : 60% contribution from the State (not including the DTCHepB) 2011 : 72% (including new vaccines)	**3**
11. Strengthening the safety of injections and waste management according to standards	- By 2011, to use self-blocking syringes exclusively for vaccination - To equip the SSD with incinerators	- 2007-2011 : 100% use of SAB for vaccinations 2007 : 25% of districts 2008 : 50% 2009 : 75% 2010-2011 : 100%	**3**

SPECIFIC OBJECTIVES 2007-2011

Table 5 : Assessment of specific objectives in time

Specific objectives	Indicators		Situation 2005	2007	2008	2009	2010	2011
To reach and maintain the rates of vaccinal coverage for all the antigens of the EPI for all children less than 1 year old, at the national level	TCV for all the antigens	DTCHepB3 VPO3	92,2% 87,4%	92% 92%	92% 92%	95% 95%	95% 95%	95% 95%
To reach and maintain a rate of non Polio acute flaccid paralysis of 2 per 100,000 in children less than 15 years old	Rate of non Polio PFA		1,8	> or = 2	> or = 2	>2	>2	>2
To eliminate maternal and neonatal tetanus	TCV in VAT 2+ (pregnant women)	SSD at high risk	47,1% (national)	70%	75%	>80%	>80%	>80%
To control measles	TCV en VAR		83,8%	90%	90%	90%	90%	90%
To reach a coverage of 95% of the new vaccine against Haemophilus Influenzae	TCV in Hib		0%	0%	92%	95%	95%	95%
To ensure the 100% safety of injections and waste disposal	% of CSB using SAB		95%	100%	100%	100%	100%	100%
To reach a rate of coverage of the cold chain of at least 95% at the national level	Effective rate of coverage of the cold chain		75%	80%	85%	90%	95%	95%
	Rate of functional cold chain		92%	90%	92%	95%	97%	100%

STRATEGIES 2007 – 2011

- **Generalization of the implementation of the ACD approach, by 2008.**

The approach "To Reach Each District" was developed with a view to improving the organization of vaccination services, in order to guarantee vaccination in a sustainable and fair way for each child. It is a question of improving the capacities of the health districts to plan, implement and manage the vaccination programmes. Having been initiated in 84 SSD, that is 76% of the whole and taking into account the results obtained, in particular the increase in routine vaccinal coverage for all the antigens, the extent of the approach will focus at the same time on its introduction to all the SSD and the strengthening of the capacities of the EPI managers and personnel assigned to the vaccination programme in planning activities, formative monitoring, use of data to direct and orientate actions relating to vaccination, as well the intensification of advanced strategies of dialogue with communities and as far as possible integrated with other health sector services.

- **Improvement in the availability of human resources qualified in the EPI**

This strategy rests on the provision, at all levels of the health system, of qualified personnel to provide quality vaccination services and monitoring of diseases targeted by the EPI to all the population, including the groups which are badly served, in collaboration with the Management of the Development of Health Districts. The planned actions include inter alia: bringing up to scratch the team implementing the vaccination programme in the use of data-processing tools, training agents at the regional and district levels in the maintenance and upkeep of the cold chain, in the use of the EPI computerized data management tool including the management of vaccines, of waste and of the cold chain, and in formative monitoring at all levels. Moreover, the promotion of pre-service training will be considered, in the circumstances the introduction of training in MLM/EPI into the programme of training institutes such as the Institute of Paramedical Training, the National Institute of Public and Community Health, Faculties of Medicine.

- **Integration of vaccination services with other health services**

Given that the vaccination programme forms an integral part of the minimum package of activities of the basic health centres in the SSD, its integration with other health services will permit a reduction in the rates of abandonment and of those lost from view, services such as the Integrated Responsibility for Children's Diseases or PCIME (catching-up), supplementing with vitamin A (campaigns) in collaboration with the nutrition service, prevention against malaria (equipping pregnant women with impregnated mosquito nets during antenatal consultations (CPN) or for children having completed their series of vaccinations), IEC/CCC activities in fixed strategies.

- **Permanent availability of vaccines**

The implementation of measures for the improvement of the vaccine management system in large part conditions the success of the vaccination programme. Within this framework, the

system for the supply of vaccines and vaccination equipment will base itself on the real needs at the operational levels, in order to avoid out-of-stock situations in vaccines and vaccination products and equipment. In addition, concerted efforts will be made by the Malagasy Government through the Ministry of Health and Family Planning and the partners supporting the health sector in favour of an effective mobilization of potential financial resources, at the level of the effective contribution of the State as well as external aid. Among other things, it consist of requesting a progressive contribution fro the Government for the purchase of routine vaccines and that of the partners for the financing of new vaccines (Plan of the Financial Viability of the EPI, Tally of Medium-term Expenditure on the Health Sector and the Global Alliance for Vaccines and Immunization).

- **Strengthening the monitoring of diseases targeted by the EPI**

Corrective actions will be implemented to improve epidemiologic monitoring, such as the census and training of focal points, the improvement of the monitoring circuit, the extension of monitoring to all basic health centres or CSB, the involvement of other actors in the health sector including the community in the active search for and reporting of cases of non polio Acute Flaccid Paralysis, suspected measles or maternal and neonatal tetanus, the facilitation of procedures for the use of funds for motivation at the level of District Health services, the revision of the directive for the despatching of samples and their follow-up (telephone and other means of communication) up to the level of the laboratory of reference.
Close cooperation will be established with the Vaccination Service, the Healthcare Service, the Service for the Health of the Mother and Child and the Pasteur Institute of Madagascar for the checking of the coherence of the data by means of periodic meetings of the committee of experts. Through this latter, the strengthening and integration with other services in the health sector monitoring the diseases targeted by the EPI will be a priority.

- **Representations and communication for vaccination**

In the image of the Inter-Agencies Coordinating Committee initiated at the central level, the installation of similar structures at the level of regions and districts is necessary and as far as possible integrated into the committees for child survival. These latter, being used as a platform for coordination and representation for an integration of the EPI activities with other health services will mainly have the responsibility of validating the implementation plan for the vaccination programme at the peripheral level, the representation according to the opportunities for the mobilization of resources, to ensure the coordination of the EPI activities and the follow-up of the recommendations of the assessments carried out, to make decisions at the opportune moment in view of the constraints / problems which risk blocking the good operation of the programme on the ground. However, the wider programming aspects will remain the responsibility of the CCIA at the central level.
In the same way, the involvement of communities in the implementation of the vaccination programme will result in the commitment of local authorities to support the installation and operating of basic structures for social mobilization in favour of primary healthcare and the EPI, active monitoring of diseases targeted by the EPI, participation in mobile and advanced vaccination strategies, as well as the active search for those lost to view.

- **Functionality of the cold chain**

The principal actions will consist of the periodic inventory of the SSD with available tools according to annual intervals, the assessment of the effective functionality of the cold chain, the assessment of EPI logistics, integrated in the annual assessment/review of the EPI programme. Orders for new equipment for the cold chain, spare parts, maintenance kits, sterilization tests, thermometers and other supports in the vaccine storage procedures will be carried out on the basis of these inventories and assessments. Moreover, a system for the maintenance of the apparatuses will be set up to determine the requirements for replacing the vaccine conservation equipment in the long term. The same will apply with regard to equipping the SSD and CSB Heads with motor cycles.

- **Improvement of the quality of data at the level of regions and districts**

The Vaccination Service and regional levels will work out coordinated monitoring plans, integrated with those of the services concerned with the health of the Mother and Child, will identify the needs concerning existing management tools for the activities of monitoring the diseases targeted and other supports for vaccination activities (infant and maternal charts, pre-report cards, etc.), and will ensure their production and distribution at all levels. Written and clear instructions will be transmitted to the SSD on the periodic meetings, the justification within the time limits of the funds allocated by the partners and the Government.
Routine reporting will be integrated with the monthly activities report of the health formations. Self-assessment of the quality of the EPI data will be carried out at the district level. However, the quality control of the data at the level of the regions and districts will be strengthened by carrying out of a self-evaluation of the data (Data Quality Survey) every year and an external audit of the quality of the data (Data Quality Assessment) every 2 years

- **Introduction of new vaccines**

Decisions relating to the introduction of new vaccines against Haemophilus Influenzae, such as the choice and presentation of the vaccines, will take into account the long-term financing of all the EPI vaccines, the implications of access to the services and the rate of services, the acceptable rates of loss of vaccines, and the reduction in the rates of those lost from view. Any planning will take into account the necessary logistics, the rate of introduction, the necessary IEC training and supports. Communications will therefore be strengthened to facilitate the introduction this new vaccine into the communities.
With regard to the initiatives for controlling the diseases targeted by the EPI such as the additional vaccination measures (campaigns) against measles and maternal and neonatal tetanus, they will be made in the context of the global plan of the fight against these diseases.
To this end, a revision of the National EPI Policy will have to be considered in 2007.

- **Financial sustainability**

In terms of the vaccination programme, the financing requirements consist primarily of the purchase of vaccines and injection equipment, providing equipment for the cold chain and rolling stock, strengthening the capacities of healthcare personnel, support the activities of

social mobilization, mobile and advanced strategies, follow-up and monitoring the diseases targeted by the EPI.

The financial sustainability of the programme is therefore based on the distribution of contributions between the Malagasy Government and its partners, namely: WHO, UNICEF, USAID, JICA, GAVI, etc. By 2012, this complete EPI multi-annual plan, which follows upon the EPI plan of financial viability (2003-2013) envisages the Malagasy State taking responsibility, in a progressive way, for purchases of routine vaccines and oil, as well as the operation of the health system (remuneration of healthcare personnel and recurrent charges), considering that the support for the EPI is recorded in the public investment plan within the framework of support for family wellbeing. As for the cost of implementation and the procuring of new vaccines, the partners such as UNICEF, WHO and USAID will extend their participation according to the evolution of the programme and the parameters of the internal and external socio-economic environment[24].

- **Strengthening the safety of injections and waste management according to the norms**

While basing itself on the joint declaration of WHO, UNICEF and UNFPA relating to the adoption of a "batch strategy" for the provision of vaccines[25], to which Madagascar has adhered (2000), the use of self-blocking syringes or SAB for the administration of EPI injections concerning all the antigens has become systematic and is recommended in the long term.

It is therefore a question of ensuring the follow-up of the application of the norms:
- on the SAB, namely: (i) the type must correspond to each antigen and be in sufficient quantities, by taking account of the rate of loss and buffer stock, (ii) the use of single use syringes for reconstitution and in sufficient quantities according to the number of doses of vaccines, (iii) the availability of safety boxes in quantities corresponding to the total number of syringes used
- on the safety boxes which must be specific for collection of the syringes, ensuring the safety of healthcare staff, users and the community and meeting the five characteristics recommended in the norms and standards of equipment for the safety of the injections [26]
- on the conditions of processing waste in health centres through training healthcare personnel, creating awareness in communities, the installation of a waste management plan at the level of healthcare establishments, the provision of adequate waste disposal equipment to health centres, according to the volume of waste generated and the site of the aforesaid health centres
- - on the adoption of the use of incineration which must imperatively respect the requirements related to their polluting character and to the health and environmenta 34 :s produced.
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[24] MSPF, Plan of Financial Viability of the EPI, Madagascar, March 2004, p. 36
[25] Joint declaration of WHO, UNICEF and UNFPA, WHO/VAB/99.25 December 1999.
[26] MSPF, National policy for waste management in healthcare establishments and the safety of injections, September 2005, p.15.

STRATEGIES AND ACTIVITIES BY COMPONENT OF THE EPI SYSTEM 2007-2011

Table 6 : Provision of services

Specific objectives (1)	Strategies (2)	Key activities (3)
By 2011, to reach and maintain the rates of vaccinal coverage for all the antigens of the EPI for all children less than 1 year old, at the national level: - 95 % of vaccinal coverage in DTC/Hep B3 - 100% of districts reaching a coverage in DTCHép3 > or = 80% - 95 % of vaccinal coverage in VPO3 - 90 % of vaccinal coverage in VAR	Generalization of the implementation of the ACD approach	To hold micro planning workshops To implement micro planning particularly in the advanced strategies To carry out monitoring and supervision of priority districts
		To re-establish regular local vaccination visits through mobile medical teams (**appropriation for means of transport and financing**) to reach every zone at least four times a year
	Improvement in the availability of human resources qualified in EPI Pre-service training	To assess the training needs of medical personnel concerned with the EPI
		To develop a continuous training plan for health workers
		To train IFP trainers in EPI management
		To introduce the MLM module into the INSPC course and medical faculties le
		To carry out the monitoring of MAPI
		To train district managers in MAPI
	Integration of routine vaccination services with other health services	To organise a campaign for supplementing with Vit A every six months
		To distribute impregnated mosquito nets to children under one year old, completely vaccinated or during DTC3 and pregnant women during CPN/VAT in zones of strong paludal endemicity
	Improvement in the quality of data at regional and district levels (Control of the quality of EPI data and of the performance of the monitoring systems)	To carry out a check of the self-assessment of data (DQS) To carry out an external check of the quality of data (DQA) To carry out a periodic assessment of vaccine management (VMA)
		To include the MAPI in the national database for monitoring the districts
From 2008, to reach and maintain a rate of non Polio acute flaccid paralysis for > of 2 in 100,000 for children less than 15 years old. (in other words, eliminate poliomyelitis by 2008)	Strengthening vaccination services(5)	To develop routine vaccination (VPO advanced and mobile strategies active research in cases of PFA

By 2011, to reduce hospital mortality due to measles complications by 95% compared with its 2000 rate (that is to say to have a rate of 0.24% from 2007)	Integration of routine vaccination services with other health services	To include Vit A and de-worming in the AVS against measles
	Strengthening additional vaccination services (AVS)	To organise monitoring vaccination campaigns (catching-up) against measles in children from 9 months to 59 months in 2007 and 2009
By 2010, to eliminate TMN	Generalization of the ACD approach in other districts not at risk	To carryout monitoring and supervision of the implementation of the ACD approach in the districts
	Strengthening additional vaccination services (AVS) in high risk zones	To carry out AVS in 23 districts of priority 2 in 2007
	Introduction and integration of the vaccine against Hib in the ACD approach	To introduce the vaccine against Hib in the 111 health districts
By 2007, to ensure the 100% safety of injections and waste management	Strengthening the safety of injections and waste management according to the standards	To make effective use of self-blocking syringes in 100% of vaccination service centres
		To periodically supply self-blocking syringes to vaccination service centres
		To implement the construction of incinerators at10 CHD2 and CHD1, CHRR and CHRP
		To bring service providers up to scratch on the safety of injections and waste management
		To train managers of incinerators of CSB2 and CHD in the maintenance of incinerators (90 persons)
No out-of-stock situations in vaccines and injection equipment at the national level	Permanent availability of vaccines at the national level	To periodically establish an adequate order for vaccines and equipment
	Functionality of the cold chain	To execute the maintenance and upkeep plan for cold chains
		To refurbish the cold chain
Implement a new communication plan in 2007	Representations and communication for vaccination	To integrate vaccination services in the national communication strategy document for child survival
Increase national financing of vaccines by at least 10% a year	Financial sustainability of the programme	To maintain the item "mission and services" in the operational budget of the service

Table 7 : Representations and communication

Specific objectives (1)	Strategies (2)	Key activities (3)
By 2011, to reach and maintain the rates of vaccinal coverage for all the antigens of the EPI for all children less than 1 year old, at the national level: - 95 % of vaccinal coverage in DTC/Hep B3 - 100% of districts reaching coverage in DTCHép3 > or = 80% - 95 % of vaccinal coverage in VPO3 - 90 % of vaccinal coverage in VAR	Involvement of NGOs in the generalization of the ACD approach and in routine EPI	To hold meetings with the NGOs
	Strengthening the coordination and Make representations at the level of the CCIA and the committee for child survival (CSE)	To maintain periodic meetings of the CCIA and CSE
		To enlarge the number of members and the agenda of the CCIA and the committee for child survival in favour of an integration of the Health of the Mother and Child (SME) components
	Re-energizing the Coordination Committee at the regional, district and communal levels	To hold information briefings and exchanges with the Coordination Committee at the regional level
From 2008, to reach and maintain a rate of non Polio acute flaccid paralysis for > of 2 in 100,000 for children less than 15 years old. (in other words, eliminate poliomyelitis by 2008)	Strengthening the coordination and Make representations at the level of the CCIA and the committee for child survival (CSE)	To enlarge the number of members and the agenda of the CCIA and the committee for child survival in favour of an integration of the Health of the Mother and Child (SME) components
		To hold periodic meetings with the various committees (National Committee of Experts, Committee for containment and National Certification Committee)
By 2011, to reduce by 95% hospital mortality due to measles complications compared with its 2000 rate (that is to say to have a rate of 0.24% from 2007)	Integration of representations and communication for routine vaccination services and other health services	To participate in the National and International days of the health of the Mother and Child
		To include measles in the key routine messages
	Make representations for the campaign	To organise monitoring vaccination campaigns against measles in children from 9 months to 59 months in 2007 and 2009
By 2010, to eliminate TMN	Make representations and communication for additional vaccination services (AVS) in high risk zones	To carry out AVS in 23 districts of priority 2 in 2007
	Integration of the fight against TMN into the ACD approach	To hold periodic meetings with the various committees (National Committee of Experts, Committee for containment and National Certification Committee)
By 2011, to reach national coverage of 95% in the new vaccine against Hib	Make representations to the political and financial decision-makers	To hold introductory workshops for the new vaccine
	Adaptation of national policy to the new vaccines	To introduce the vaccine against Hib into the National Vaccination Policy
By 2007, to ensure the 100% safety of injections and waste management	Strengthening the IEC on the safety of injections and waste management according to the standards	To train and make aware service providers and the community

No out-of-stock situations in vaccines and injection equipment at the national level	Permanent availability of vaccines at the national level	To make the communities and the partners aware of their active participation in the financing of vaccination services
	Functionality of the cold chain	
Implement a new communication plan in 2007	Improvement of the communication plan in favour of an increase in demand	To carry out operational research into the information requirements of communities
		To integrate vaccination services in the national communication strategy document for child survival
		To collaborate with the national and local media
	Development of communication supports	To design and distribute IEC/CCC tools
Increase national financing of vaccines by at least 10% a year	Financial sustainability of the programme	To make representations to the political and administrative decision-makers for the increase of the item "mission and services" in the operational budget of the service

Table 8 : Monitoring of diseases targeted by the EPI

Specific objectives (1)	**Strategies (2)**	**Key activities (3)**
By 2011, to reach and maintain the rates of vaccinal coverage for all the antigens of the EPI for all children less than 1 year old, at the national level: - 95 % of vaccinal coverage in DTC/Hep B3 - 100% of districts reaching coverage in DTCHép3 > or = 80% - 95 % of vaccinal coverage in VPO3 - 90 % of vaccinal coverage in VAR	Generalization of the ACD approach in all districts	To carry out formative and integrated monitoring with the epidemiologic monitoring
		To carry out the monitoring of actions and performance indicators of the monitoring of diseases targeted by the EPI
		To organise regular get-togethers between the community and the health workers
	Improvement in the quality of data at regional and district levels	To hold periodic meetings at the regional level
		To include the MAPI in the national database for the monitoring of districts

From 2008, to reach and maintain a rate of non Polio acute flaccid paralysis for > of 2 in 100,000 for children less than 15 years old. (in other words, eliminate poliomyelitis by 2008)	Strengthening epidemiologic monitoring	To develop community participation in active research
		To hold periodic meetings with the various committees (National Committee of Experts, Committee for containment and National Certification Committee)
	Integration of epidemiologic monitoring of diseases targeted by the EPI with other services	To carry out integrated active monitoring in all districts
		To combine support for the laboratory of reference, training and measles / polio supplies
By 2011, to reduce by 95% hospital mortality due to measles complications compared with its 2000 rate (that is to say to have a rate of 0.24% from 2007)	Integration of epidemiologic monitoring of diseases targeted by the EPI with other services	To carry out integrated active monitoring for the PFA, measles and TMN in all districts
		To set up an operational monitoring network for measles
		To equip the focal points in vehicles
		To train the monitoring focal points case by case for measles and other diseases
		To reproduce and distribute quarterly news letters
		To intensify monitoring visits at all levels
		To organise quarterly regional monitoring reviews
		To organise half-yearly national monitoring reviews
		To combine support for the laboratory of reference, training and measles / polio supplies (Supply the lab with reagent and consumables, monitoring and inventory of laboratories)
By 2010, to eliminate TMN	Strengthening epidemiologic monitoring	To develop community participation in active research
	Integration of epidemiologic monitoring of diseases targeted by the EPI with other services	To carry out integrated active monitoring for the PFA, measles and TMN in all districts
By 2011, to reach national coverage of 95% in the new vaccine against Hib	Integration of epidemiologic monitoring of diseases targeted by the EPI with other services	To set up sentinel sites for the monitoring of Hib
By 2007, to ensure the 100% safety of injections and waste management	Strengthening the safety of injections and waste management	To make communities aware of their active participation in the safety of injections and waste management
		To bring up to scratch/to train health workers at all levels in the safety of injections and waste management
No out-of-stock situations in vaccines and injection equipment at the national level	Permanent availability of vaccines at the CSB level	To supply periodically the vaccination service centres with vaccines, self-blocking syringes and safety boxes
	Availability of a sufficient quantity of injection equipment at the CSB level	
Implement a new communication plan in 2007	Integration of epidemiologic monitoring of diseases targeted by the EPI with the communication plan	To integrate vaccination services in the national communication strategy document for child survival
Increase national financing of vaccines by at least 10% a year	Consideration of the activities of epidemiologic monitoring in the plan of the financial sustainability of the programme	To include the epidemiologic monitoring requirements in the item "mission and services" in the operational budget of the service

Table 9 : Supply, quality and logistics of vaccines

Specific objectives (1)	Strategies (2)	Key activities (3)
By 2011, to reach and maintain the rates of vaccinal coverage for all the antigens of the EPI for all children less than 1 year old, at the national level: - 95 % of vaccinal coverage in DTC/Hep B3 - 100% of districts reaching coverage in DTCHép3 > or = 80% - 95 % of vaccinal coverage in VPO3 - 90 % of vaccinal coverage in VAR	Integration of the ACD approach in all the Development Plans (PDD) and Annual Work Plans (PTA) of the districts	To support the regions and districts in the development of their PDD and PTA in favour of he success of the EPI programme
		To carry out formative and integrated monitoring of the quality and logistics of vaccines
		To provide health training in the Management Tools (OG)
From 2008, to reach and maintain a rate of non Polio acute flaccid paralysis for > of 2 in 100,000 for children less than 15 years old. (in other words, eliminate poliomyelitis by 2008)	Permanent availability of vaccines at the national and operational levels	To strengthen the monitoring of the on the job training of health personnel to establish periodically an adequate order for vaccines and equipment (estimate of requirements, rate of order, adaptation of order, stock control)
By 2011, to reduce by 95% hospital mortality due to measles complications compared with its 2000 rate (that is to say to have a rate of 0.24% from 2007)	Permanent availability of vaccines at the national and operational levels	To strengthen the monitoring of the on the job training of health personnel to establish periodically an adequate order for vaccines and equipment (estimate of requirements, rate of order, adaptation of order, stock control)
By 2010, to eliminate TMN	Permanent availability of vaccines at the national and operational levels	To strengthen the monitoring of the on the job training of health personnel to establish periodically an adequate order for vaccines and equipment
By 2011, to reach national coverage of 95% in the new vaccine against Hib	Permanent availability of new vaccines at the national and operational levels	To give initial training to health personnel in the use and stock control of the new vaccine according to the presentation
		To strengthen the monitoring of the on the job training of health personnel to establish periodically an adequate order for vaccines and equipment

By 2007, to ensure the 100% safety of injections and waste management	Strengthening the safety of injections and waste management	To make the use of self-blocking syringes effective at the level of 100% of the vaccination service centres
		To supply periodically the vaccination service centres with vaccines, self-blocking syringes and safety boxes
		To implement the supply policy of bundling (to deliver automatically the same quantities of vaccines as syringes) in each district
		To bring service providers up to scratch on the safety of injections and waste management
		To integrate the monitoring of syringe stocks into district reports
	Set up a network of incinerators and a waste management system	To implement the national policy on waste management and the safety of injections
No out-of-stock situations in vaccines and injection equipment at the national level	Permanent availability of vaccines at the national level	To establish periodically an adequate order for vaccines and equipment
	Functionality of the cold chain	To execute the maintenance and upkeep plan for cold chains
		To refurbish the cold chain (30% of units will be replaced per year)
Implement a new communication plan in 2007	Integration of upkeep and maintenance in the communication plan	To make communities and partners aware of their active participation in the upkeep and maintenance of the cold chain
Increase national financing of vaccines by at least 10% a year	Consideration of upkeep and maintenance activities in the plan of the financial sustainability of the programme	To include the requirements of upkeep and maintenance in the operational budget of the service

Table 10 : Management of the programme

Specific objectives (1)	Strategies (2)	Key activities (3)
By 2011, to reach and maintain the rates of vaccinal coverage for all the antigens of the EPI for all children less than 1 year old, at the national level: - 95 % of vaccinal coverage in DTC/Hep B3 - 100% of districts reaching coverage in DTCHép3 > or = 80% - 95 % of vaccinal coverage in VPO3 - 90 % of vaccinal coverage in VAR	Integration of the management of human and financial resources of the ADC approach in all districts	To hold micro planning workshops Implement micro planning Carry out monitoring and supervision of priority districts
	Improvement in the availability of human resources qualified in EPI Pre-service training	To assess the training needs of health workers
		To develop a continuous training plan
		To train IFP trainers in EPI
		To introduce the MLM module into the INSPC course and medical faculties
		To train district managers in MAPI
	Improvement in the quality of data at regional and district levels (Control of the quality of EPI data and of the performance of the monitoring systems)	To carry out a check of the self-assessment of data (DQS) To carry out an external check of the quality of data (DQA) To carry out a periodic assessment of vaccine management (VMA)
From 2008, to reach and maintain a rate of non Polio acute flaccid paralysis for > of 2 in 100,000 for children less than 15 years old. (in other words, eliminate poliomyelitis by 2008)	❑ Improvement in the availability of human resources qualified in EPI ❑ Integration of routine vaccination services with other health services ❑ Strengthening additional vaccination services (AVS) ❑ Generalization of the ACD approach in districts	To bring managers at all levels up to scratch on: - formative and integrated monitoring, - management of the EPI programme (MLM), - analysis and use of data at the peripheral level for action
By 2011, to reduce by 95% hospital mortality due to measles complications compared with its 2000 rate (that is to say to have a rate of 0.24% from 2007)		To make effective use of computerized management tools in the regions

By 2007, to ensure the 100% safety of injections and waste management	Strengthening the safety of injections and waste management according to the standards	To carry out formative monitoring of the implementation of the national policy on waste management and the safety of injections
		To train district managers in MAPI, the safety of injections and waste management
No out-of-stock situations in vaccines and injection equipment at the national level	Permanent availability of vaccines at the national level	To establish periodically an adequate order for vaccines and injection equipment
	Functionality of the cold chain	To execute the maintenance and upkeep plan for cold chains
		To refurbish the cold chain
Implement a new communication plan in 2007	Representations and communication for vaccination	To carry out formative monitoring of the application of the communication plan at regional and district levels
Increase national financing of vaccines by at least 10% a year	Financial sustainability of the programme	To integrate the planning for the vaccination programme (Annual Work Plan) in the national process of inclusion in the budget (CDMT)
		To draw up a draft agreement and protocol of agreement in the short term
		To develop liaison processes with a view to facilitating the transfer of the information on the estimate of costs to the national decisions for inclusion in the budget
		To strengthen the capacity for financial and management planning
		To carry out formative monitoring of intermediate and operational levels in financial and management planning

CENTRAL ACTIVITIES ACCORDING TO THE GIVS 2007 - 2011

Table 11 : Use of the GIVS framework as the control list

GIVS Strategies	Key activities	Activities included in the PPAC			
Strategic domain 1 : To protect more people in a changing world		**Yes**	**No**	**Without purpose**	**New activity required**
Strategy 1 : To use a combination of strategies to reach all those who are targeted for vaccination	To maintain a constant national commitment in favour of the vaccination services thanks to the development of a policy and a strategy which also includes human resources and financial planning	X			
	To formulate and implement national multi-annual strategic plans and annual plans of activities on the basis of the analysis of the data and the resolution of the problems	X			
	To maintain a strong vaccinal coverage where it has been reached	X			
	To use national strategies to vaccinate children who were not done during early childhood (**PCIME)**	X			
	To include additional vaccination activities as an integral part of the national plans (When it is suitable)	X			
Strategy 2 : To increase the demand for vaccination from the community	To associate members of the community, NGOs and associations with the representations and implementation of vaccination **(communication plan)**	X			
	To assess the communication gaps existing in reaching all communities and to work out and implement a plan of communication and social mobilization	X			
	To provide regular, reliable and sure vaccination services which satisfy the demand	X			
Strategy 3 : To ensure that groups which are not served are reached in each district at least four times a year	To develop micro-planning at the district or local level **('ACD' Approach)**	X			
	To reduce the number of vaccination abandonments (incomplete vaccination) through improved management	X			
	To develop and update the monitoring mechanisms and tools	X			
	To provide prompt financing, logistical support and supplies for the implementation of the programme				
Strategy 4 : To vaccinate beyond the group traditionally targeted	To define the target populations and age brackets for vaccination appropriate to the national situation	X			
	To assess the cost effective ratio of the strategies	X			

GIVS Strategies	Key activities	Activities included in the PPAC			
Strategic domain 1 : To protect more people in a changing world		**Yes**	**No**	**Without purpose**	**New activity required**
Strategy 5 : To improve the safety of vaccines, vaccination and injections	To buy vaccines only from sources which satisfy the internationally recognized quality standards	X			
	To assure the long-term forecasting for existing and new vaccines by improving competencies in vaccine management	X			
	To promote national independence in quality assurance and regulatory monitoring**(purchase via UNICEF)**			X	
	To introduce, support and monitor safe injection practices, including the use of self-blocking syringes and other safe methods of administering vaccines	X			
	To carry out the monitoring of and responses to undesirable post-vaccinal side-effects	X			
	To be aware of the potential problems involved in the safety of vaccines and to solve them urgently	X			
Strategy 6 : To improve and strengthen the systems of vaccine management	To determine an exact forecast of demand at the national and district levels in order to ensure the uninterrupted supply of vaccines, of self-blocking syringes and safety boxes in sufficient quantity and quality	X			
	To strengthen the capacities of effective vaccine management of vaccinate through training, monitoring and the development of information systems **(computerized data management tool)**	X			
	To increase access and coverage by means of a 'safe chain' approach which involves bringing vaccines beyond the cold chain, using a system of vaccine management based on the PCV	X			
	To evolve coordinated and sectoral financing and management for transport and communications	X			
Strategy 7 : To assess and strengthen the vaccination programme	Regular assessments of the vaccination programme at local, district and national levels and retro-information on performance	X			
	To carry out operational research and the evaluation of "what goes" in order to improve the vaccination service and to make the systems more effective, efficient and equitable	X			

GIVS Strategies	Key activities	Activities included in the PPAC			
Strategic domain 2: To introduce new vaccines and technologies		**Yes**	**No**	**Without purpose**	**New activity required**
Strategy 8 : To strengthen the country's capacity to define the politicise and priorities for the new vaccines and technologies	To assess the burden of disease and the cost and cost-effectiveness ratio of new vaccines	X			
	To ensure that the long term financial needs of the national government and the support partners are completely included and committed before the introduction of new vaccines	X			
Strategy 9 : To assure the effective and durable introduction of new vaccines and technologies	To integrate the introduction of each new vaccine into the multi-annual sectoral plans of countries and to provide a financial analysis	X			
	To give adequate training to health workers and vaccination managers at all levels **(if introduction of Hib acquired)**	X			
	To have material for information, education and communication (IEC) adapted to ensure good understanding of the advantages of the new vaccines or technologies **(if introduction of Hib acquired)**	X			
	To make sure that in the five years following introduction, the coverage of new vaccines reaches the same level of coverage as other vaccines **(if introduction of Hib acquired)**	X			
Strategy 10 : To promote research and development for diseases which are important in terms of public health	To extend the monitoring of diseases which can be prevented by the new vaccines				X
	To document local evidence in order to influence and give priority to public and private investments in new vaccines and technologies			X	

GIVS Strategies	Key activities	Activities included in the PPAC			
Strategic domain 3: To place vaccination, other connected health services and monitoring in the context of the health systems		**Yes**	**No**	**Without purpose**	**New activity required**
Strategy 11 : To strengthen vaccination programmes in the context of the development of health systems	To regularly analyze the data from all districts, document the key success and failure factors of the vaccination services **(ACD approach)**	X			
	To take an active part in the collective efforts intended to shape policies and sectoral programmes **(PNS)**	X			
	To use the experience gained in the development of the health systems as an opportunity to make the vaccination services benefit all to the maximum **(decentralization and regionalization)**	X			
Strategy 12 : To improve human resources management	To make an inventory of human resources requirements	X			
	To plan human resources and ensure that they are sufficient, well trained and properly remunerated	X			
	To carry out formative monitoring	X			
	To motivate health workers in inaccessible or unsettled areas so that they reach all the eligible populations	X			
Strategy 13 : To assess and develop the appropriate integration measures	To develop and test on the ground common potential interventions (**SSME,** mother and child/vaccination health week, fight against malaria, CPN, SR/MSR, fight against STI and HIV AIDS...) (**SIMR or** Integrated Monitoring of Diseases and Responses)	X			X
	To adapt the sets of integrated measures				X
Strategy 14 : To maximise the advantages of integrated measures	To include common measures in the multi-annual and annual plans	X			
	To formulate and implement integrated training plans in these plans				X
	To jointly implement measures with a particular accent on mobile teams and advanced strategies	X			
	To monitor and assess the growing effectiveness, efficiency and impact of the combined measures	X			

GIVS Strategies	Key activities	Activities included in the PPAC			
Strategic domain 3: To place vaccination, other connected health services and monitoring in the context of the health systems		**Yes**	**No**	**Without purpose**	**New activity required**
Strategy 15 : To support the advantages of integrated measures	Re-energize the management structure facilitating coordination and effectiveness **(committee for child survival)**	X			
	To recommend more synergies and explore additional connections	X			
	To gather the necessary resources to cover operational and other costs **(Nutrition and EPI - Malaria and EPI**	X			
	To remain attentive to the perceived needs of the community	X			
	To create joint financing, monitoring and assessment functions	X			
Strategy 16 : To strengthen the follow-up of coverage and monitoring based on the cases	To extend existing monitoring systems (such as monitoring polio and measles) to progress towards effective monitoring based on cases of diseases preventable by vaccination	X			
	To improve the monitoring of vaccine coverage and other related health measures	X			
	At the global level, to develop and provide new methodologies to countries to estimate the burden			X	
Strategy 17 : To strengthen laboratory capacity by setting up a network of laboratories	To extend the existing network laboratories			X	
	To provide training, equipment, reagents and procedures for quality control **(WHO)**	X			
Strategy 18 : To strengthen the management, analysis, interpretation, use and exchange of data at all levels	To improve data management through regular training, with monitoring and retro-information at the local level	X			
	To regularly examine the district performance indicators	X			
	To design better tools (e.g. software) for monitoring the coverage of vaccines and common measures **(EPI and Vit A)**	X			
	To control the quality and performance of the follow-up and monitoring systems of coverage **(DQS and DQA)**	X			
	To collaborate with the government to recommend the increase in the registration of birth and deaths **(district and common levels and Health Centres) and (project ezaka kopia or EKA with the Ministry for the Population, Leisure and Social Protection)**	X			

GIVS Strategies	Key activities	Activities included in the PPAC			
Strategic domain 3: To place vaccination, other connected health services and monitoring in the context of the health systems		**Yes**	**No**	**Without purpose**	**New activity required**
Strategy 19 : To provide access to vaccination in complex humanitarian emergences	To include questions relating to vaccination in the rapid assessment of complex emergency situations **(Emergency Services and the management of Disasters/ National Aid Committee / Mobile Medical Team)**				X
	To incorporate vaccination services in plans and activities in preparation for emergencies (**SUCA/CNS/ESM)**				X
	To restore vaccination services for populations affected by complex emergencies **(ESM)**	X			
	To include diseases preventable by vaccination in the integrated monitoring and follow-up systems set up in response to complex emergencies	X			
Strategic domain 4 : To vaccinate in the context of global interdependence					
Strategy 20 : To assure a reliable global supply of vaccines at an affordable price and of an assured quality	To establish a long-term forecast for existing and new vaccines through close cooperation between the international organizations, the donors and the vaccine manufacturers	X			
Strategy 21 :To assure sufficient and sustainable financing of the national vaccinal systems	To strengthen national capacities for financial planning within the vaccination program itself, the Ministry of Health and Family Planning and the other ministries involved as a whole	X			
	To commit increased and sustained allocation from the public budget for vaccines, on the basis of a better understanding of the value of vaccines on public health	X			
	To encourage the contribution to the health services and the vaccination programmes of the local and district levels through interaction with local firms and interests	X			
	To coordinate the financing of vaccination by means of the CCIA in order to ensure the adequate and appropriate support of donors to governments	X			
Strategy 22 : To improve communications and the distribution of information	To produce prompt and quality information on the advantages of vaccination	X			

GIVS Strategies	Key activities	Activities included in the PPAC			
Strategic domain 4 : To vaccinate in the context of global interdependence		**Yes**	**No**	**Without purpose**	**New activity required**
Strategy 23 : To define and acknowledge the roles of the partners	To determine the roles of every partner in the vaccination programme de	X			
Strategy 24 : To include vaccines in the global preparation for epidemics	To draw up preparation and prevention plans for epidemics specific to the countries and relevant for specific diseases		X		

CALENDAR OF ACTIVITIES 2007-2011

Table 12 : Calendar of activities

Key activities	Year 1	Year 2	Year 3	Year 4	Year 5
Provision of services					
To hold micro planning workshops (ACD)	X				
To implement micro planning	X	X			
To carry out AVS in 23 districts of priority 2 in 2007	X				
To re-establish regular local vaccination visits through mobile medical teams to reach every zone at least four times a year	X	X	X		
To implement the construction of incinerators at10 CHD2 and CHD1, CHRR and CHRP	X	X	X		
To bring service providers up to date on the safety of injections and waste management	X	X	X		
To include Vit A and de-worming in the AVS against measles	X		X		
To organise monitoring vaccination campaigns (catching-up) against measles in children under 5 years of age in 2007 and 2009	X		X		
To carry out the follow-up and monitoring of priority districts	X	X	X	X	X
To carry out the follow-up of the MAPI	X	X	X	X	X
To train district managers in the MAPI	X		X		
To organise a campaign for supplementing in vitamin A every six months	X	X	X	X	X
To distribute impregnated mosquito nets to children under one year old, completely vaccinated or during DTC3 and pregnant women during CPN/VAT in zones of strong paludal endemicity	X	X	X	X	X
To carry out a check of the self-assessment of data (DQS) To carry out an external check of the quality of data (DQA) To carry out a periodic assessment of vaccine management (VMA)	X X X	X	X X X	X	X X X
To include the MAPI in the national database for monitoring the districts	X	X	X	X	X
To develop routine vaccination (VPO), advanced and mobile strategies, active research in cases of PFA	X	X	X	X	X
To carryout monitoring and supervision of the implementation of the ACD approach in the districts	X	X	X	X	X
To make effective use of self-blocking syringes in 100% of vaccination service centres	X	X	X	X	X
To periodically supply self-blocking syringes to vaccination service centres	X	X	X	X	X
To periodically establish an adequate order for vaccines and equipment	X	X	X	X	X
To execute the maintenance and upkeep plan for cold chains	X	X	X	X	X
To refurbish the cold chain (30% of units will be replaced per year)	X	X	X	X	X
To introduce the vaccine against Hib in the 111 health districts		X			

Key activities	Year 1	Year 2	Year 3	Year 4	Year 5
Representations and communication					
To make representations to the political and administrative decision-makers for the increase of the item "mission and services" in the operational budget of the service	X				
To carry out operational research into the information requirements of communities	X				
To introduce the vaccine against Hib into the National Vaccination Policy	X				
To hold introductory workshops for the new vaccine	X	X			
To integrate vaccination services in the national communication strategy document for child survival	X			X	
To design and distribute IEC/CCC tools	X	X	X		
To hold meetings with the NGOs	X	X	X	X	X
To maintain periodic meetings of the CCIA and CSE	X	X	X	X	X
To enlarge the number of members and the agenda of the CCIA and the committee for child survival in favour of an integration of the Health of the Mother and Child (SME) components	X	X	X	X	X
To hold information briefings and exchanges with the Coordination Committee at the regional level	X	X	X	X	X
To hold periodic meetings with the various committees (National Committee of Experts, Committee for containment and National Certification Committee)	X	X	X	X	X
To participate in the National and International days of the Health of the Mother and Child	X	X	X	X	X
To include measles in the key routine messages	X	X	X	X	X
To train and make aware service providers and the community	X	X	X	X	X
To make the communities and the partners aware of their active participation in the financing of vaccination services, the up-keep and maintenance of the cold chain, the safety of injections and waste management	X	X	X	X	X
To collaborate with the national and local media	X	X	X	X	X

Key activities	Year 1	Year 2	Year 3	Year 4	Year 5
Surveillance					
To carry out formative and integrated monitoring with the epidemiologic monitoring	X	X	X	X	X
To carry out the monitoring of actions and performance indicators of the monitoring of diseases targeted by the EPI	X	X	X	X	X
To organise regular get-togethers between the community and the health workers	X	X	X	X	X
To develop community participation in active research	X	X	X	X	X
To hold periodic meetings at regional level	X	X	X	X	X
To carry out integrated active monitoring for the PFA, measles and TMN in all districts	X	X	X	X	X
To combine support for the laboratory of reference, training and measles / polio supplies	X	X	X	X	X
To include the epidemiologic monitoring requirements in the item "mission and services" in the operational budget of the service	X	X	X	X	X
To set up sentinel sites for the monitoring of Hib (if introduced)			X		

Key activities	Year 1	Year 2	Year 3	Year 4	Year 5
Supply, quality and logistics of vaccines					
To give initial training to health personnel in the use and stock control of the new vaccine according to the presentation	X	X			
To support the regions and districts in the development of their PDD and PTA in favour of he success of the EPI programme	X	X	X	X	X
To carry out formative and integrated monitoring of the quality and logistics of vaccines	X	X	X	X	X
To provide health training in the Management Tools (OG)	X	X	X	X	X
To strengthen the monitoring of the on the job training of health personnel to establish periodically an adequate order for vaccines and equipment	X	X	X	X	X
To implement the supply policy of bundling (to deliver automatically the same quantities of vaccines as syringes) in each district	X	X	X	X	X
To integrate the monitoring of syringe stocks into district reports	X	X	X	X	X
To carry out formative monitoring of the implementation of the national policy on waste management and the safety of injections	X	X	X	X	X
To include the requirements of upkeep and maintenance in the operational budget of the service	X	X	X	X	X

Key activities	Year 1	Year 2	Year 3	Year 4	Year 5
Management of the programme					
To assess the training needs of health workers involved in the EPI	X				
To develop a continuous training plan for health workers	X				
To train IFP trainers in EPI	X				
To draw up a draft agreement and protocol of agreement in the short term	X				
To develop liaison processes with a view to facilitating the transfer of the information on the estimate of costs to the national decisions for inclusion in the budget	X				
To strengthen the capacity for financial and management planning	X				
To introduce the MLM module into the INSPC course and medical faculties	X	X			
To bring managers at all levels up to scratch on formative and integrated monitoring, management of the EPI programme (MLM), use of data	X	X			
To make effective use of computerized management tools in the regions	X	X	X		
To carry out formative monitoring of the application of the communication plan at regional and district levels	X	X	X	X	X
To carry out formative monitoring of intermediate and operational levels in financial and management planning	X	X	X	X	X
To integrate the planning for the vaccination programme (Annual Work Plan) in the national process of inclusion in the budget (CDMT)	X	X	X	X	X

ESTIMATE OF THE COSTS OF THE PROGRAMME

In order to carry out the activities set out in the Complete Multi-annual Plan to achieve the goals laid down by 2011, an analysis of the financing plan for the five (5) years is necessary. From the results of the financial analysis it emerges that the total cost of the budget supporting the PPAC over the period 2007 – 2011 will depend primarily on the type of presentation of the new vaccines against the Haemophilus Influenzae B, which it is planned introduce into the national vaccination programme in 2008, according to the recommendations made in the report on the analysis of the financing of the vaccination programme in Madagascar in September 2006[27]. In addition, this analysis rests on the assumption that the natural annual rate of increase in the population in the five years remains stable at 2.8%, that the birth rate is maintained at around 35.3%o births and that the proportion of women of child-bearing age approaches 23% of the total population.

Taking account of the objectives of vaccinal coverage for all the EPI antigens in children less than one year old to 95% in 2011, with for DTCHepB3 from 92,2% in 2005 to 95% in 2009 and for VPO3 from 87,4% in 2005 to 95% in 2009, on the one hand; the introduction of vaccines against haemophilus influenzae B in 2008 with a coverage of 95% by 2011, in addition, as well as reducing losses of vaccines by 15% - 5%, three scenarios are proposed below.

The choice of scenarios has been dictated moreover by the presentation of combined vaccines available on the market, acceptable according to WHO and on the basis of catalogues of vaccines, in particular DTCHep B and Hib. The ideal would be to have one pentavalent vaccine that would make it possible to give children a single injection and which would at the same time minimize the requirements for additional injection equipment for the reconstitution of vaccines or for equipment for the conservation of additional vaccines with a longer conservation capacity. However, according to the catalogues consulted and information collected, it would seem that the presentations available concern either the combination of DTC and Hep B, or of DTC and Hib. The following scenarios can therefore be proposed:

- scenario 1: bottle DTCHib 10 doses+ HepB 10 doses
- scenario 2: bottle DTCHepB 10 doses + Hib 10 doses
- scenario 3: bottle DTCHepBHib 02 doses.

The present analysis aims at helping the managers and partners of the national vaccination programme to better understand the budget that is necessary and rational for the implementation of the future strategic plan 2007 – 2011. It especially takes account of the acceptable fixed cost which can generate wide vaccinal coverage of the populations targeted and the effective long term independence of the Expanded Programme of Immunisation, which are integrated in the vision of the Malagasy Government.

[27] Lydon P., WHO/Immunization Biological Vaccines, Madagascar cMYP Costing – Mission Report, 2006, p. 8.

General comments

The analysis of the costs of the vaccination programme for the period 2007-2011 is based on a comparison of the scenarios proposed with the earlier experiences of the two previous years, 2004 and 2005.

1. The trend of costs in 2004 – 2005

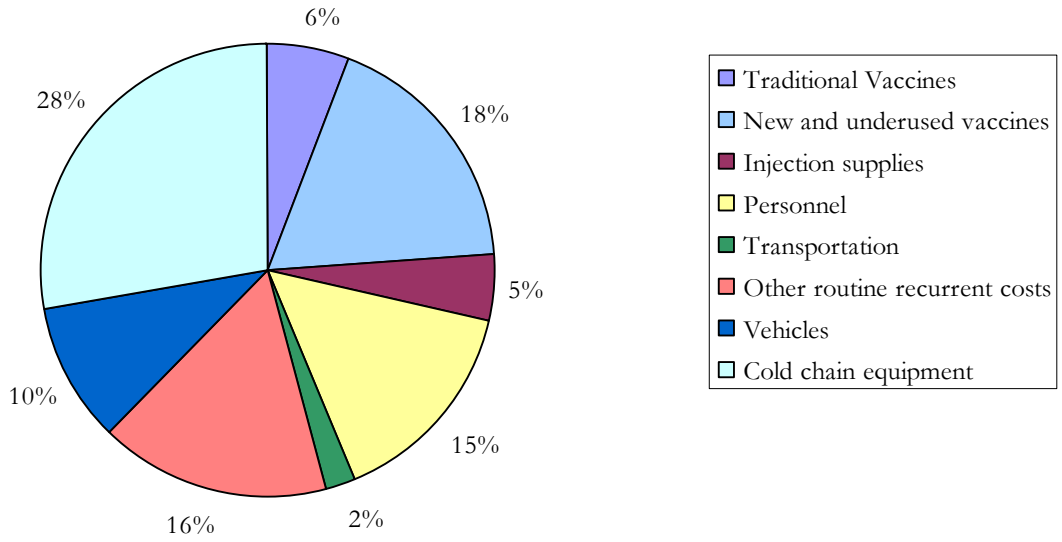

Figure 2 : Profile of the costs of the vaccination programme for 2004

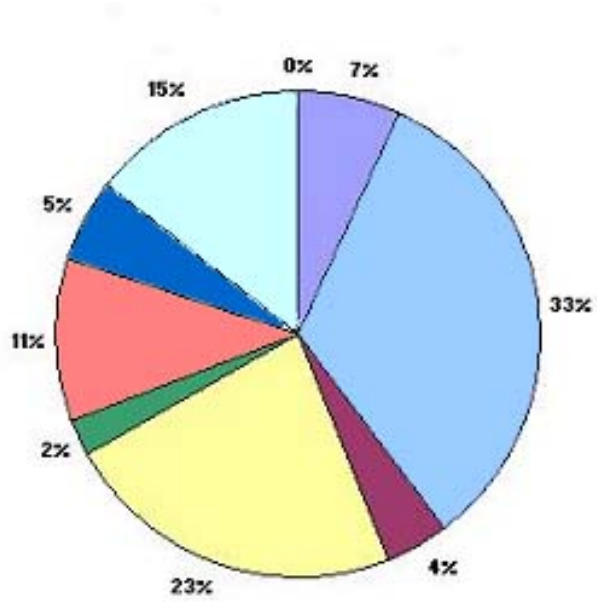

Figure 3 : Profile of the costs of the vaccination programme for 2005

In terms of the budget supporting the vaccination programme at the national level, after showing an annual increase from 2000 until to 2004, this showed a reduction of approximately 11% in 2005 compared to its 2004 volume. Indeed, the budget allocated to the programme in 2005 amounted to 16 million dollars (USD) against 18 million USD in 2004. By comparing the two financial years:

- in 2005, the programme invested more in the purchase of vaccines with a cost relating to the purchase of vaccines against DTCP-HepB accounting for 33% of the total cost allocated and the costs of personnel amounting to 23% of the total cost. During the same year, routine vaccination activities intensified, through additional vaccination services (VAT among women of child-bearing age) and the advanced strategies accompanying the introduction of the ACD approach in 84 districts, as well as vaccination campaigns against poliomyelitis in 27 districts (VDPV) which mobilized some 1.5 million USD;
- while in 2004, expenditure particularly focused on the execution of the plan for the renewal of cold chain equipment and rolling stock, which consumed more than a quarter of the total budget allocated (28%). With regard to the provisions of services, the vaccination campaigns absorbed 7 million USD (HIAKA);
- as far as the cost indicators of the programme are concerned, the cost per child vaccinated with DTC3 amounted in 2005 to 12.6 USD against 21 USD in 2004, that is a reduction of approximately 60%.

1. The trend of costs for the three scenarios from 2007 to 2011

❑ ***General trend of costs***

From 2007 to 2011, the total cost of the programme remains appreciably the same for the three (03) scenarios, that is 83 million USD with a minimum value of 81 million USD and a maximum value of 85 million USD. The implementation of the programme would require an average budget per annum of approximately 16.6 million USD with a minimum level of 16.2 million USD per annum (scenario 1 with DTCHib and Hep vaccines in the presentation of 10 separate doses) and a maximum budget of 17 million USD per annum (scenario 3 with Hep and Hib in the combined presentation of 2 doses). Compared to the 2005 budget of 11.6 million USD, the annual budget planned for the implementation of the PPAC 2006 – 2011 presents an average financial variation of 43%, that is an average rise of 1.04 million USD per annum

In addition, in term of changes over time, the budget shows an uneven evolution, with peaks particularly in 2008 and 2010. These peaks correspond to the forecast acquisition of an increased amount of cold chain equipment, being part of the units to be refurbished or constituting new batches of equipment, taking account of the measures accompanying the introduction of new vaccines, when the national vaccinal coverage also reaches a higher level (from 92% to 95% for all the antigens). Moreover, the cost of the Hib vaccines in to the presentations available on the market would significantly increase the budget at the time of its introduction in 2008 and for the 3 scenarios.

In view of the context whereby a considerable number of the Malagasy population are enclosed, blocking access to the vaccination services, the advanced strategy still remains a strategy impossible to ignore in order to improve vaccinal coverage of the whole population. Therefore, to achieve certain goals set from now till 2011, this strategy requires to be strengthened by integrated vaccination campaigns. To this end, the implementation of an integrated vaccination campaign would require a budget in addition to the routine programme of approximately 3.3 million USD, that is less than one quarter of the total budget for the year concerned. Which explains the peak in 2010 and the increase in cost in 2007 compared to the 2005 budget.

Table 13 : Requirements in future resources in USD according to the scenarios

Scenario 1 : DTCHIB 10 doses and HEP B 10 doses
Scenario 2 : DTCHEP 10 doses and HIB 10 doses
Scenario 3 : DTCHEPBHIB 2 doses

	2007 (US$)			2008 (US$)			2009 (US$)			2010 (US$)			2011 (US$)			Total 2007 - 2011 (US$)		
Components of the multi-annual plan	**Scenario 1**	**Scenario 2**	**Scenario 3**	**Scenario 1**	**Scenario 2**	**Scenario 3**	**Scenario 1**	**Scenario 2**	**Scenario 3**	**Scenario 1**	**Scenario 2**	**Scenario 3**	**Scenario 1**	**Scenario 2**	**Scenario 3**	**Scenario 1**	**Scenario 2**	**Scenario 3**
Vaccines, Injection equipment and Logistics	5 629 213	5 447 510	6 496 242	11 635 611	12 363 816	11 586 388	9 464 801	10 649 488	9 887 324	10 779 912	11 655 737	11 348 977	8 760 396	9 863 668	9 143 008	46 269 933	49 980 218	48 461 939
Strengthening the Vaccination System	7 895 145	7 424 971	8 270 929	5 546 384	5 546 384	5 908 995	5 390 630	5 390 630	5 767 799	9 096 260	8 554 212	9 488 572	5 176 386	5 176 386	5 584 455	33 104 806	32 092 584	35 020 750
Representations and Communication	51 000	51 000	51 000	41 616	41 616	41 616	53 060	53 060	53 060	35 720	35 720	35 720	48 580	48 580	48 580	229 976	229 976	229 976
Epidemiologic Monitoring and Surveillance	117 384	117 384	117 384	119 472	119 472	119 472	124 249	124 249	124 249	127 816	127 816	127 816	131 477	131 477	131 477	620 398	620 398	620 398
Management of the Programme	108 911	108 911	108 911	121 665	121 665	121 665	135 955	135 955	135 955	151 965	151 965	151 965	169 906	169 906	169 906	688 401	688 401	688 401
General Total	13 801 653	13 149 776	15 044 465	17 464 749	18 192 953	17 778 136	15 168 695	16 353 382	15 968 387	20 191 674	20 525 450	21 153 051	14 286 744	15 390 016	15 077 425	80 913 515	83 611 578	85 021 464

It should be noted that the operating expenses relating to the social mobilizations presented above in the component "Representations and communication" only concern the cost related to mass media and printed media. On the other hand, the requirements at the time of the vaccination campaigns are included in the sub-component "operational costs of campaigns" in the component "Strengthening the vaccination system".

In addition, costs relating to the wages of personnel and to the maintenance and overheads of the buildings will be considered in the RSS for the good implementation of the PPAC and its effective and efficient integration with the other services of the health system.

- ***Comparative analysis of the three scenarios***

With an average total budget of 16.6 million USD per annum, the difference between the three (03) scenarios resides at the level of the cost of the programme by child vaccinated. Scenario 1 and 2 would lead respectively to an average cost distribution of 24.5 USD and 26.0 USD per child vaccinated in DTC3.

On the other hand, for Scenario 3, this cost rises to 26.0 USD per child vaccinated in DTCHepB3. However, the programme's managers should pay detailed attention to the distribution of cost between the levels of the health system at the time of implementation, taking into account the more or less considerable disparity of requirements in vaccinal coverage according to regions and districts.

1. Profile of future financing for the three scenarios from 2007 to 2011

Currently, the Government's contribution in support of the vaccination programme, which is especially focused on the purchase of vaccines and oil, as well as on the costs of personnel still remains weak. However, according to the plan of financial viability for the vaccination programme, its participation remains assured for the years to come taking into account its commitment in this field. On the assumption that the national economic growth rate increases by 8% per annum, the budget allocated to the health sector could derive a positive fall-out, resulting in an additional budget increase of 10% per annum by way of contribution to the supply of vaccines[28].

For the PPAC 2007 – 2011, it should be noted that the certain and probable financing to support the strategic plan is still for the greater part supported by the partners, representing more than 80% of the total cost of the financing requirements (83%).

On the basis of this future financing plan, for scenarios 1 and 3, it has been estimated that 12% of the total cost over five years, that is approximately 11 million USD can be regarded as a certain consolidation between 2007 and 2011, and 75% as probable financial resources. On the other hand, for the second scenario, financing is only assured for 11% the total cost and is probable for 77%.

As a result, it is estimated that an "average gap" of 12%, that is approximately 11 to 12 million USD of the total cost between 2007 and 2011, is to be filled either by an increase in the State's contribution or by an additional contribution from the usual partners or again by the mobilization of new potential partners.

It is necessary to note that the effectiveness of the financing of the PPAC 2007 – 2011 of Madagascar above all depends on the hoped for assured and probable financing from the GAVI Initiative, UNICEF, WHO and USAID.

[28] MSPF, Plan of Financial Viability of the Expanded Programme of Immunisation of Madagascar, 2004-2013, p.40.

Discussions

According to the analysis, it seems that scenario 1 would have an advantage owing to the fact that it would make it possible to achieve coverage with wide impact at less cost, with an acceptable distribution of cost of DTC3 per child vaccinated (bordering on 24.5 USD). However, and on the practical level, account should be taken of the possibility of the availability of a presentation of DTCHib and HepB at the same time, or of DTCHepB and Hib available from the same manufacturer which could allow an extemporaneous combination of the five vaccines in one injection for a single administration. That would be the equivalent of increasing the time health workers could devote to the reconstitution of combined vaccines.

In the case of the figure for pentavalent vaccines, scenario 3 (DTCHibHepB 2 doses) is considered to be interesting with a distribution of cost of DTC3 per child vaccinated bordering 26.0 USD. However, its adoption would require an increase in cold chain requirements for the storage of vaccines, injection equipment and in transport costs. Waste management would also be weighed down.

For the three scenarios, in the introduction plan for Hib from 2008, it would be necessary to envisage setting up sentinel sites for monitoring diseases due to the Haemophilus influenzae B within regional hospitals of reference or district hospitals.

On 27 February 2007, a meeting of the Committee for Child Survival validated the PPAC 2007 – 2011, and chose scenario 3 (with DTCHep Hib of two doses: pentavalent) as the first preference because of the advantages quoted above, but subject to the availability of these DTCHepB+Hib 2 doses vaccines in sufficient quantity, and the follow-up measures of accompaniment to carry it out, namely an increase in storage capacity at all levels.

The government has shown an appreciable willingness to lead from the front through its effective participation in support of the programme, in particular in the supply of routine vaccines and new vaccines in Madagascar. In continuation of its efforts, it is hoped to see a progressive contribution in vaccines passing from 50% in 2008, 60% in 2009, 70% in 2010 and 80% in 2011 for the implementation of the PPAC 2007-2011[29].

[29] MSPF, Plan of Financial Viability of the Expanded Programme of Immunisation of Madagascar, 2004-2013, p.40.

RESPONSIBILITIES OF THE EPI PARTNERS

1. Ministry of Health and Family Planning - Vaccination Service– Regional Departments:

In its capacity as the primary organisation responsible for the health sector in Madagascar, the Ministry of Health and Family Planning will mainly ensure the leadership of the realization of the multi-annual plan and the execution and follow-up of the various action plans with the support of the partners. It will be responsible for: assuring the management of the vaccination programme; the organization on a monthly basis of the meeting of the Inter-Agencies Coordinating Committee (technical) and quarterly (senior) within the framework of support for EPI; the increase in the Government's contribution as regards the purchase of routine EPI vaccines; the maintenance of the Government's contribution for the purchase of oil needed for the operation and maintenance of the cold chain; the forecast in the State's budget of the progressive increase in the participation in the expenses related to the implementation of the advanced strategy and the holding of periodic reviews of healthcare personnel at the level of the SSD; development of directives needed for the application of the recommendations resulting from the assessments.

2. Pasteur Institute of Madagascar:

The IPM which constitutes the national laboratory of reference for the biological monitoring of diseases targeted by EPI will be particularly involved in the vaccination programme: to strengthen its support as regards epidemiologic monitoring of diseases targeted of EPI; to continue basic epidemiologic studies relating to diseases targeted by EPI; to take part regularly in meetings of the Inter-Agencies Coordinating Committee with the Ministry of Health and Family Planning within the framework of support for the EPI; to take part in the monitoring activities of the Vaccination Service especially as regards epidemiologic monitoring; to regularly share the results of research in connection with EPI with the Ministry of Health and Family Planning and its partners in the EPI.

3. JICA (JAPAN):

The contribution of the Japanese Government through JICA is embodied in the maintenance of its financial support to the EPI; the pursuit of the mobilization of internal resources in support of the EPI; its regular participation in meetings of the Inter-Agencies Coordinating Committee with the Ministry of Health and Family Planning within the framework of support for the EPI.

4. The World Health Organization:

WHO will give its support to the programme through the maintenance of its financial support to the EPI; the pursuit of the mobilization of internal resources and additional funds for the support of the EPI; regular participation in the meetings of the Inter-Agencies Coordinating Committee with the Ministry of Health and Family Planning within the framework of support for the EPI; technical support for the EPI especially as regards epidemiologic monitoring; participation in the monitoring activities organized by the Vaccination Service; the distribution of international information regarding vaccination.

5. UNICEF

Within the framework of its programme of support for the health of the mother and child, UNICEF will contribute to the implementation of the vaccination programme by maintaining its financial support to the EPI; pursuing the mobilization of internal resources and additional funds for the support of the EPI; taking part regularly in the meetings of the Inter-Agencies Coordinating Committee with the Ministry of Health and Family Planning within the framework of support for the EPI; strengthening the representations relating to vaccinal independence; assuring technical support to the EPI; taking part in the monitoring activities organized by the Vaccination Service; taking care of the integration of vaccination with basic community measures supported by UNICEF; promoting the integration of vaccination in the integrated multi-media plan of the UNICEF Information and Communication Section.

6. USAID and connected Organizations (SANTENET, BASICS, MCDI, etc.)

Through its agencies of execution and local partners, USAID will give its support in the maintenance of its financing to its local partners involved in strengthening vaccination activities; the pursuit of the mobilization of internal resources and additional funds in support of the EPI; the strengthening of the EPI activities in the SSD measures of the project including the integration of EPI with basic community measures; regular participation in the meetings of the Inter-Agencies Coordinating Committee with the Ministry of Health and Family Planning within the framework of support for the EPI; technical assistance to EPI especially in the implementation of the action plan; participation in the monitoring activities organized by the Vaccination Service.

FOLLOW-UP OF THE IMPLEMENTATION

1. In accordance with the action plan of the Vaccination Service, monthly meetings of the Inter-Agencies Coordinating Committee (technical sub-committee) with the Ministry of Health and Family Planning within the framework of support for the EPI will be held at the invitation of the Family Health Department. Meetings of the Committee for Child Survival (of which the senior CCIA is part) will be held every quarter.

2. The Vaccination Service will assure the secretariat and will propose an agenda for each meeting, taking account of the recommendations of the members of the CCIA. The agenda for these monthly meetings will systematically include progress reports on the implementation of the annual action plan of the Vaccination Service, the follow-up of the rates of vaccinal coverage by province and by SSD, the follow-up of the evolution of new cases of diseases targeted by the EPI and the follow-up of the recommendations of the periodic evaluations of the vaccination programme.

3. The senior CCIA will be consulted on all the large programme decisions aimed at improving the performances of the EPI.

ACTION PLAN 2007

Table 15 : Action plan 2007

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The Minister of Health (or the senior civil servant)

Signature: ……(signature illegible)……

Dr ROBINSON JEAN LOUIS

Title: Minister of Health and Family Planning

Date: ……

The Minister of Finances (or the senior civil servant)

Signature: ……(signature illegible)……

Benjamin (illegible) RADAVIDSON

Title: Minister of Finances and the Budget

Date: ……

Inter-agencies coordination committee for vaccination:

The CCIA met on the **27 February 2007** in order to examine the proposal of support.
At this meeting, the committee approved the proposal on the basis of the PPAC.

Name/Title	Institution/Organisation	Signature
Dr Leonard TAPSOBA Dr Antoine TALARMIN	WHO	(signed)
Director Pasteur Institute of Madagascar	IPM	(signed)
Bruno MAES Representative UNICEF	UNICEF	(signed)