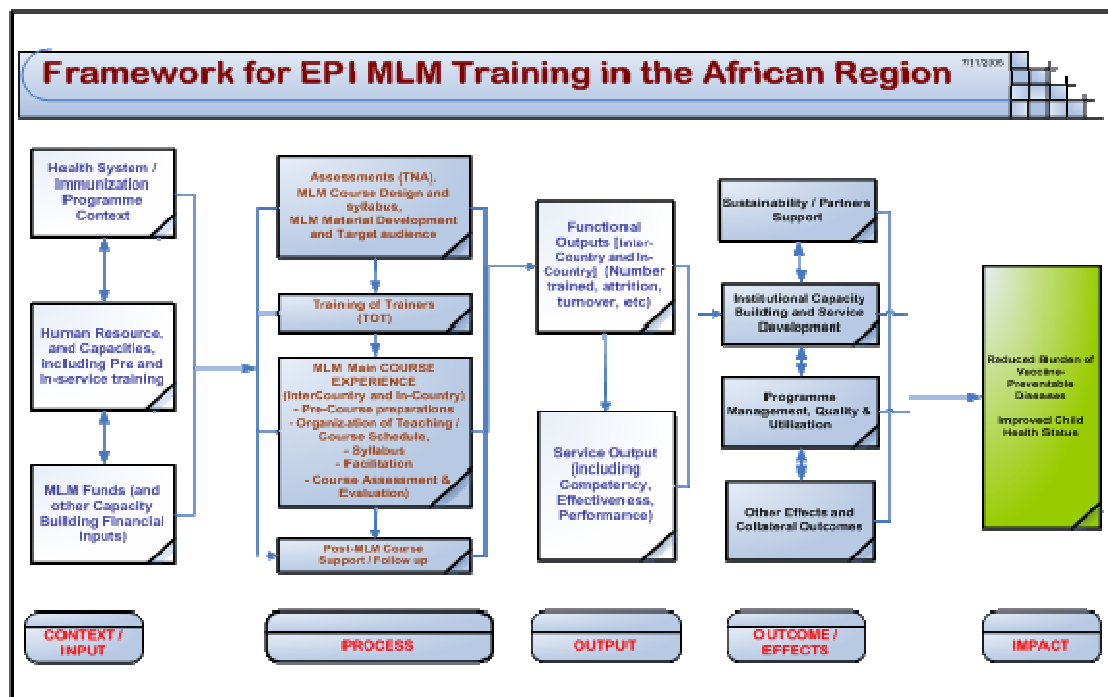


# Mid-Level Management Training in Immunization in the African Region 2000-2004

## Summative Evaluation



July 2005



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# Contents

<b>List of Abbreviations</b>	<b>vii</b>
<b>Executive Summary</b>	<b>viii</b>
<b>Part I – Introduction</b>	<b>12</b>
<i>1. Introduction</i>	13
<b>1.1 MLM Background and Evaluation Rationale</b>	13
<b>1.2 Evaluation Objectives</b>	14
<b>1.3 Evaluation Framework</b>	14
<b>1.4. Evaluation Design and Method</b>	15
1.4.1 Selection of Countries for Field Visit	15
1.4.2 Evaluation Teams and Timeline	16
1.4.3 Study Factors and Areas/Topics for Evaluation	16
1.4.4 Evaluation Methods and Data Collection Tools	17
1.4.5 Structure of the Report	
<b>Part II – MLM Context and Training</b>	<b>19</b>
<i>2. Context and Inputs of the EPI Mid-level Management Training</i>	20
<b>2.1 Training Strategy, Health System Context and External Environment</b>	20
2.1.1 African Region Capacity Building Strategy for Immunization Programme	20
2.1.2 Regional Training Strategy Implementation	21
2.1.2: Status of Strategic Activities / Actions	22
<b>2.2 The Training Needs Assessment</b>	23
<b>2.3 Capacity Building: Pre and In-Service Training</b>	25
2.2.1 Training in Immunization at Country Level	25
2.2.1.1 Pre-service Training:	25
2.2.1.2 In-service Training	30
<b>Part III – MLM Training Implementation: Experiences and Results</b>	<b>31</b>
<i>3. MLM Training Process - Target Audience, Course Design and Syllabus, Material Development</i>	32
<b>3.1 MLM Course Overview and Justification</b>	32
<b>3.2 Target Audience</b>	34
<b>3.3 MLM Training Concepts / Principles</b>	35
<b>3.4 Training Methods and Techniques</b>	36
<b>3.5 Course Objectives, Contents and Syllabus</b>	37
<b>3.6 MLM Modules and Material development</b>	38
<b>3.7 MLM Course Design</b>	40
<b>3.8 Training of Trainers’ (TOT) Sessions</b>	41
<b>3.9 Course Evaluation options</b>	43
<b>3.10 Assessment of the MLM course by participants</b>	44
<b>3.11 Post-MLM Training Follow Up</b>	51
<b>3.12. MLM Training Costs</b>	52
<i>4. MLM Training Output</i>	55
<b>4.1. Overview of MLM Training Outputs</b>	55
a. Inter-country Courses	55

b. National EPI MLM Courses	58
<b>4.2 MLM Trainees' Profile and Characteristics</b>	<b>58</b>
4.2.1. Characteristics of MLM Trainees	58
4.2.2 Participants' Attrition and Turnover Rates	62
<b>4.3 Trainees' Competency, Effectiveness and Performance</b>	<b>64</b>
4.3.1. Self Assessment of Performance by MLM Participants	64
4.3.2. Assessment of Trainees by Supervisors	65
<b>4.4 Facilitators' Profile</b>	<b>66</b>
5. <i>MLM Training: Outcome and Impact</i>	70
<b>5.1. Institutional Capacity Building and EPI Programme Management Competency / Quality of Service</b>	<b>70</b>
<b>5.2. Other Effects, Collateral Benefits and Impact of MLM Training</b>	<b>71</b>
<b>5.3. MLM Training Sustainability – National Commitment and Partner Support</b>	<b>73</b>
<b>Part IV – Lessons and Recommendations</b>	<b>75</b>
6. <i>Strengths, Weaknesses, Opportunities and Threats to MLM Training</i>	76
7. <i>Conclusions and Lessons Learnt</i>	79
8. <i>Looking Forward – Major Recommendations</i>	82
 Annexes	<hr/>
<b>Annex I – Terms of Reference for MLM Summative Evaluation</b>	<b>86</b>
<b>Annex 2: Evaluation Team Composition and Periods of Country Visits</b>	<b>88</b>
<b>ANNEX III: List of WHO/AFRO EPI Mid-Level Management (MLM) Course Evaluation Tools (ET)</b>	<b>89</b>
<b>Annex IV: Reorganized MLM course modules for various options</b>	<b>90</b>

# List of Tables

<u>Table</u>	<u>Page</u>
Table 1a: Status of Strategy Implementation	10
Table 1b: Implementation of strategic actions	10
Table 2: Assessment of tutors' awareness on EPI	16
Table 3: Perceived training needs	18
Table 4: Modules selected or Adapted for in-country MLM courses	28
Table 5: MLM Course design patterns	30
Table 6: Training of Trainers (TOT) session results	31
Table 7: Results of course validation of MLM modules, Dakar MLM Course (2002)	33
Table 8: Highest and lowest levels of Satisfaction Index (%) given by participants to individual and all MLM modules at the end of the course	36
Table 9a: EPI MLM Courses: cost estimations (US \$):	43
Table 9b: Cost estimations of in-country EPI MLM courses	44
Table 10: Inter-country EPI MLM course details	44
Table 11: EPI MLM courses in the countries visited	47
Table 12: Participants from visited countries trained at AFRO inter-country EPI MLM courses	49
Table 13: Attrition and turnover rates in Ghana in relation to EPI	52
Table 14: Career advancement of participants after MLM training	53
Table 15: Facilitators' pool	55
Table 16: Improvements of other quality indicators of immunization services in Ghana	59

# List of Figures

<b><u>Figure</u></b>	<b><u>Page</u></b>
Fig 1: Framework for MLM Training Evaluation	4
Fig 2: Pre-service Teaching Staff Trained in MLM in Countries Visited	15
Fig 3: EPI Contents in Training School Curriculum & Availability of EPI Training Tools	17
Fig 4: Operational components of Immunization	22
Fig 5: Foundation Elements of Immunization programme	22
Fig 6: MLM Training Process	24
Fig 7: Satisfaction Index for Inter-country MLM Courses	34
Fig 8 Satisfaction Index for In-country MLM Courses	37
Fig 9: Overall Satisfaction Index for In-country MLM Courses	38
Fig 10: Assessment of Various Aspects of MLM Courses	39
Fig 11: Costs of MLM Training per Participant	44
Fig 12a: Number of Participants Trained at AFRO Inter-country courses, 2000-2004	46
Fig 12b. Number of Participants per Facilitator at AFRO Inter-country Courses, 2000-2004	47
Fig 13: Profile of MLM Trainees	48
Fig 14: Trends in Training of Teachers at Inter-country EPI MLM Courses	49
Fig 15: Participants Trained at In-Country MLM Courses	50
Fig 16 Participants' Attrition and Turnover Rates in Countries Visited	51
Fig 17: MLM Participants Attrition at National and Sub-national levels in Ghana	52
Fig 18: Improvement of Performance in Work Areas Following MLM Training	53
Fig 19: Assessment of Performance of MLM Past Participants by their Immediate Supervisors	54
Fig 20. Profile of Facilitators at MLM Courses	56
Fig 21. DPT3 Coverage in the African Region, 1984 - 1994	60
Fig 22. DPT3 Coverage trends in Countries Visited, 1984 - 1994	60

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# List of Abbreviations

AD	Auto-disable (syringes)	IIP-	Immunization in Practice ( WHO training course for peripheral health workers)
ADB	African Development Bank	IMCI-	Integrated Management of Childhood Illness
AEFI	Adverse event following immunization	JICA-	Japan International Development Agency
AFP	Acute flaccid paralysis	LCD-	Liquid crystal display
AFRO	African Regional Office (of WHO)	MCH-	Maternal and child health
ARICC	African Regional Inter-agency Coordination Committee	MLM-	Mid-level Management (course)
BASICS	Basic Support for Institutionalizing Child Survival	MNTE-	Maternal and neonatal tetanus elimination
BCG	Bacillus Calmette-Guerin	MOH-	Ministry of Health
CB	Capacity building	N.A.-	Not available
CBO-	Capacity Building Officer	NESI-	Network for Education and Support in Immunization
CBOH-	Central Board of Health	NGO-	Non-governmental organization
CC-	Cold chain	NID-	National Immunization Day (a campaign for polio eradication initiative)
CD-	Compact disk	NIP	National Immunization Programme
CEIS-	Computerized EPI information system	NRA	National Regulatory Authority
CHW-	Community health worker	OPV	Oral polio vaccine
CIDA-	Canadian International Development Agency	PH	Public health
CVP/PATH-	Children Vaccine Programme / Programme for Appropriate Technology for Health	PHN	Public health nurse
DANIDA-	Danish Agency for International Development	PHC	Primary health care
DDC-	Directorate (Division) of Disease Control	RED	Reaching every district
DFID-	Department for International Development	SEARO	South-East Asian Regional Office (WHO)
DHMT-	District Health Management Team	SI	Satisfaction Index
DHP-	District health package	SIA	Supplemental Immunization Activities
DOR-	Dropout rate	TFI	Task Force for Immunization
DPC-	Disease prevention and control	TNA	Training needs assessment
DPT-	Diphtheria, pertussis, tetanus (vaccine)	TOR	Terms of reference
DGA-	Data quality audit	TOT	Training of trainers
DRC-	Democratic Republic of Congo	UCI	Universal Child Immunization
GAVI-	Global Alliance for Vaccines and Immunization	UNEPI	Uganda Expanded Progr. on Immunization
GTN-	Global Training Network	UNF	United Nation Foundation
EHT-	Environmental health technician	UNICEF	United Nation's Children Fund
EMRO-	Eastern Mediterranean Regional Office (WHO)	USAID	United States Agency for International Development
EPI-	Expanded Programme on Immunization	UTH	University teaching hospital
ET-	Evaluation tool	VPD	Vaccine preventable diseases
EU-	European Union	VVM	Vaccine vial monitor
FGD	Focus group discussion	WB	World Bank
FSP-	Financial sustainability plan	WHO	World Health Organization
HepB	Hepatitis B (vaccine)		
Hib-	Haemophilus influenzae type b (vaccine or infection)		
HRD	Human resource development		
HRH-	Human sources for health		
ICC	Inter-agency Coordination Committee		
ICP-	Inter-country project (team)		
IDSR	Integrated disease surveillance and response		
IEC	Information, education and communication		

# Executive Summary

The Global Immunization Vision and Strategy (GIVS) document (A58/12) presented to the 58<sup>th</sup> World Health Assembly, calls for the strengthening and improvement in programme management for the realization of the vision. Expanded Programme on Immunization (EPI) reviews in many countries reveal gaps in training, planning and management at district and service delivery levels. Training Needs Assessments (TNA) in 14 countries refer to the needs for management training, bottlenecks between pre- and in-service training, poor coverage of EPI topics in the curricula, lack of training in EPI of teachers and other gaps. One of the reasons of this situation was the stagnation of EPI management training in the African Region during 1994-1999. This critical situation necessitated broader collaborative efforts from partners: WHO, UNF, USAID, UNICEF, NESI, CVP/PATH, etc., to revamp the MLM training. In view of the above situations and based on decisions of the WHO Regional Committee (AFR/RC52/9, 2002) as well as 1998 and 2003 Regional EPI evaluation results, AFRO intensified efforts towards MLM training. Significant progress in EPI mid-level management training at inter-country and country levels started in 2000.

While course specific evaluation is included in the syllabus of the course itself, there has not been a summative evaluation to highlight the role of MLM training in the improvement of the immunization programme management in the Region. It is in this light that this summative evaluation was conducted to verify whether the MLM training has really contributed to improvement of EPI performance and how the MLM training can be further improved to match better with health performance.

This regional evaluation included two phases: an **internal evaluation** and an **external evaluation** which included AFRO and some selected countries: **Ethiopia, Ghana, Lesotho, Senegal and Zambia**. The findings from the internal evaluation and individual country evaluations is consolidated into this overall evaluation report reflecting the Regional trends, strategies, historical evolution and achievements as well as diversities and common grounds in MLM training in various country situations.

The evaluation design included a review of the training materials/tools, methods, organization of training, cost estimates, and effectiveness and acceptability of EPI MLM in-service and pre-service training at inter-country and country levels in the African Region. The evaluation was a mix of activities carried out internally and by external members. The initial phase constituted an internal evaluation through a desk review of MLM training data at the Inter-country and Regional offices. The second, external phase of the evaluation (April-May 2005), was conducted by a multidisciplinary team composed of experts from WHO, UNICEF, UNF, USAID, NESI. It involved review of findings from internal evaluation, field visits and systematic post-course measurements through reaction, learning, performance and effects evaluation. This included participants who attended the course, their supervisors and co-health workers, MLM course facilitators, as well as teachers/tutors of training institutions applying respondent-friendly questionnaires and other tools.

The key findings of the Inter-country and in-country MLM training evaluation are outlined below:

### **A. The Inter-country MLM Training programme**

- MLM training programme is based on RC Resolutions of WHO/AFRO, Regional 2001-2005 Immunization Strategic Plan, TFI recommendations, TNAs and national programme reviews. Its “legitimacy” is high having strong backup by decision makers.
- The programme has a tremendous support and involvement by partners who consider MLM training as a joint venture. Current evaluation exercise is a good example of this having evaluators from WHO, UNICEF, UNF, USAID, NESI.
- Programme has effective leadership at WHO/AFRO, WHO/ICP levels to promote, plan and implement MLM training which is seen as a major component of capacity building. This has enabled AFRO to move from ad hoc training to planned MLM courses well distributed in time, by WHO official languages in the Region and by WHO Inter-country Epidemiological Blocks.
- During 2000-2004, 11 MLM courses were held and 642 participants trained including 416 EPI managers, 110 teachers/professors and 114 WHO/UNICEF EPI focal persons, and some others. An “explosion” occurred in training of academic staff in 2003-2004 courses with an average of 22 professors/teachers trained per course, who going back to their institutions introduced change in EPI teaching based on new developments and strategies in EPI (GIVS, RED).
- Through perception of users and country-based partners, satisfaction index results and observations in the field during the external evaluation, it is evident that the MLM training has increased the performance of the trained staff and therefore contributed to the improvement of EPI coverage in the African Region. Judged by DPT3 as an indicator, its coverage in the region increased from 49%- in 2001 to 69%- in 2004 (JRF,2004). Similar improvements in DPT3 coverage rates have been observed in all visited countries.
- Other, collateral benefits of the MLM course include: development of capacity building plans by country teams during the course of training; development by the host country of a solid pool of facilitators for national EPI and other MLM courses (e.g. IMCI, management of malaria, IDSR), extra-regional participation and use of AFRO MLM modules by the WHO other regions (EMRO, SEARO).
- There is a set of well elaborated, structured and learner-friendly modules which have undergone a series of testing, validation by experts and MLM course participants. They were well adapted and were unique for African region. All modules were scored very highly by MLM course participants/facilitators.
- Faculty of MLM courses comprising AFRO, WHO/ICP, UNICEF etc., is technically strong, experienced and able self-sufficiently run the MLM course with active, adult learning methodology and problem-solving approach. This was confirmed by 8 focus group discussions and individual interviews with participants/facilitators.

***However:***

- Despite practical steps taken and high interest shown towards programme integration at AFRO (establishment of an Integration Task Force with a CB sub-group, etc.), MLM training remains a predominantly vertical event.
- There is a “tick” bottleneck between pre-service training and national EPI services due to inconsistencies of outdated curriculum of pre-service institutions (results of most TNAs) and current practices, innovations and new technologies in EPI.
- The follow up of trained managers or facilitators has not been consistent both at regional and countries levels.

**B. The In-country MLM Training programme**

- ◇ MLM training is well recognized and supported by health authorities.
- ◇ Countries visited expanded the MLM training through cascading it to province/region and district levels.
- ◇ During AFRO MLM training, CB plans were developed by countries. Some of them have already been funded by AFRO and partners.
- ◇ Country-based partners consider MLM training as a “Good value for money”.
- ◇ Some countries adapted AFRO MLM modules to suit their specific country situation and needs.
- ◇ Each country visited had a pool of facilitators to run a self-sufficient MLM course.

***However:***

- ◇ The evaluation team observed that there is a lack of a reliable database on EPI training activities to keep the institutional memory on training and support capacity building analysis by programme management.
- ◇ There is an insufficient involvement and use of private sector in training.
- ◇ Most of the country EPI plans were oriented towards training without touching other components of CB (e.g. HRD, empowerment of service users, institutional development, etc.).
- ◇ There is a lack of updated EPI curriculum as well as reference materials (including MLM modules), didactic and demonstration tools at training institutions.
- ◇ There is a lack of training materials in local languages.

The key recommendations made by the evaluation team to improve the MLM training at country and regional level are outlined below:

1. There is a need for AFRO, partners and the national authorities to:

- Strengthen the teaching of EPI in the basic training of health personnel to equip the new graduates with the necessary skills and knowledge in line with Global Immunization Vision and Strategies and Millennium Development Goals.
- Encourage countries to link professional education and academics with service realities harmonizing pre-service and in service training.
- Develop an EPI generic curriculum for pre-service training institutions and disseminate it through workshops and seminars at country level.

2. In view of well developed training programme and coverage of wide range of managerial and operational topics in EPI MLM course, consideration should be given to institutionalization of the MLM course in three public health training centres in the Region for English, French and Portuguese speaking countries. This will also facilitate integration of other disease prevention control and other health interventions into the MLM training (e.g. IMCI, management of malaria, IDSR).

3. For health facility level training on EPI, the suitability of the MLM course modules has been questioned due to complexity of the content and large volume. It is therefore recommended to use the recently updated “Immunization in Practice” that is a WHO training manual for cascade training of health staff at this level.

4. In view of cost effectiveness of the in-country training, partners should increase their support to MLM training at country level.

5. Countries should be encouraged to integrate EPI training at district level, harmonizing training content, materials, approaches and methods with other programmes providing training in related content (IMCI, RBM, etc.).

6. There should be a specific follow up of the implementation of the Training needs assessments (TNA) recommendations both at AFRO and country level.

7. AFRO and countries should maintain an inventory of all training courses and training materials to maintain the institutional memory and facilitate analysis of training data.

8. AFRO should conduct operational research on impact of training.

# Part I – Introduction

# 1. Introduction

The background to the MLM evaluation, the rationale, objectives and framework are outlined in this section. The design, method and tools of the evaluation were also described in this section.

## *1.1 MLM Background and Evaluation Rationale*

Evidence from various health facility surveys and EPI reviews conducted during the past decade at country and regional levels shows that the most important barriers to reaching every child in every district with immunization services were still related to planning and management of human, material and financial resources at district and service delivery levels, rather than just physical barriers to access. To overcome these barriers, capacity building to improve managerial skills and to integrate the immunization services within the social and health infrastructure is the major operational strategy. All EPI managers were therefore expected to have practical management skills.

EPI reviews in many countries show gaps in planning and management at district and service delivery levels. Training Needs Assessments (TNAs) in 14 countries refer to the needs for management training, bottlenecks between pre- and in-service training, poor coverage of EPI topics in the curricula, lack of training in EPI of teachers themselves, and insufficient reference and didactic materials at training institutions. One of the reasons of this situation was the stagnation of EPI training activities in the past, especially management training, as no MLM courses were conducted in the African Region during 1994-1999.

This critical situation has necessitated the broader collaborative efforts from partners - UNF, USAID, UNICEF, WHO, NESI, CVP/PATH - to revamp the MLM training. Thus the MLM training started in 2000 – following a lull of more than 5 years – and between 2000 and 2004 a significant progress was recorded in EPI mid-level management training at inter-country and country levels.

While course specific evaluation is included in the syllabus of the MLM course itself, there is a need for a summative evaluation in order to assess role of MLM training in the improvement of the immunization programme management in the Region. The “2001-2005 Policy and Strategic Plan for Immunization Capacity Building” also recommended that “Each EPI training programme will have a midterm evaluation and an end of programming cycle evaluation”, as did the framework of project documents of various immunization partners, including the UNF funded project “Improving immunization Management in eight countries”. These form the rationale for the summative evaluation of the EPI MLM training contained in this document. This regional evaluation consisted of two phases: an **internal evaluation** and an **external evaluation** which included AFRO and some selected countries: **Ethiopia, Ghana, Lesotho, Senegal and Zambia**. The findings from the internal evaluation and individual country evaluations is consolidated into this overall evaluation report, reflecting the regional trends, strategies, historical evolution and

achievements as well as diversities and common grounds in MLM training in various country situations.

## ***1.2 Evaluation Objectives***

### ***General Objective of the Evaluation***

The general objective of the MLM evaluation was to assess the effectiveness and the impact of different components and approaches to inter-country and national EPI MLM training (2000-2004) and its contribution to the management of EPI services at country level.

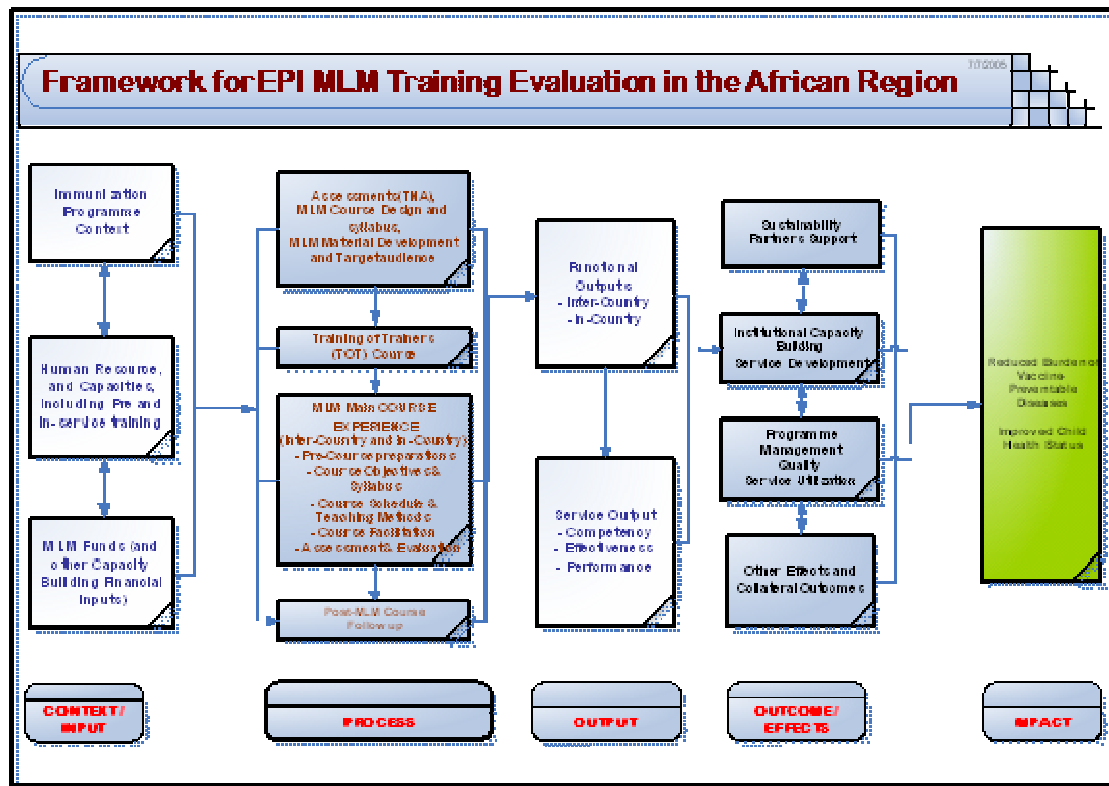
### ***The specific objectives were as follows:***

- Revisit and make critical analysis of EPI MLM training process, including the course syllabus, target audience, describe and assess its steps and pedagogical scenarios;
- Assess the course and participants' performance evaluation system;
- Assess how facilitators and participants judge the inter-country EPI MLM course based on their views about the objectives, content and the process (reaction evaluation);
- Determine if facilitators and participants understand, accept and were able to use the MLM course methods and materials ( theoretical learning evaluation)
- Describe immediate and long-term benefits/impact of MLM training;
- Assess the level of current and potential support by countries and partners for EPI MLM training in the African Region;
- Identify strengths, weaknesses, opportunities and threats of the EPI MLM training to meet international and national immunization programmes needs;
- Make recommendations addressing challenges at regional and country levels.

## ***1.3 Evaluation Framework***

The conceptual framework for the summative evaluation of the MLM training programme is shown in the Figure below. The conceptual framework shows the relationship between the MLM Training inputs and improved health outcome – a key focus of a summative evaluation. The input factors include the health system and immunization programme context, human resource capacities, and the MLM training funds / other financial inputs. The Training Needs Assessments, curriculum development and target audience as well as the MLM training and follow-up support activities were captured as process factors. The quantity and quality of trained MLM-certified staff (from inter-country and in-country courses) were covered as output components while their effects on institutional capacity, sustainability and service delivery may be addressed as outcome issues; the link between these and the medium to long term impact on immunization coverage, disease burden and child health status represent the impact component. This report also presents the findings of the evaluation based on this framework (Fig 1).

Fig.1: Framework for EPI MLM Training Evaluation in the African Region



## 1.4. Evaluation Design and Method

The MLM evaluation was based on a protocol developed by VPD/AFRO. A cross sectional survey/evaluation was conducted of the training materials/tools, methods, organization of training, cost estimates, and effectiveness and acceptability of EPI MLM in-service and pre-service training at inter-country and country levels in the African Region. The evaluation was a mix of activities carried out internally and by external members. The initial phase consisted of desk review of data at the Inter-country and Regional offices. The second, external phase of the evaluation was conducted by a multidisciplinary team involving review of findings from internal evaluation and field visits to selected countries.

### 1.4.1 Selection of Countries for field visit

Taking into account the priority countries of the UNF and USAID funded projects, as well as in-country training activities, the sampling frame included following countries:

- Senegal, Mali, Malawi, Madagascar, Nigeria, Tanzania, Zambia and Zimbabwe (UNF)
- Ghana, Mali, Senegal, Guinea, Ethiopia and Uganda (USAID)
- Mozambique (Portuguese-speaking country representative)
- Lesotho, Burundi, Mauritania and Côte d'Ivoire (in-country training activities)

- South Sudan and Somalia (extra-regional influence)

The following countries were selected as being representative of the sampling frame:  
*Ethiopia, Ghana, Lesotho, Senegal and Zambia.*

#### **1.4.2 Evaluation Teams and Timeline**

The Internal Evaluation team was represented by AFRO VPD staff, the EPI Capacity Building Officer being a key member, AFRO Inter-country Office staff and an AFRO consultant. This component of the evaluation was carried out during 2004-2005 and covered inter-country courses conducted during 2000-2004.

External evaluation teams included representatives from WHO, UNICEF, UNF, USAID, NESI and external consultants. Country visits were conducted during April-May 2005 and covered training activities in 2000-2004.

A UNICEF Consultant was invited to provide experience of extra-regional influence from Southern Sudan during the evaluation. The Annex 2 gives details of evaluation team composition per country and periods of country visits.

#### **1.4.3 Study factors and areas/topics for evaluation**

The plan of the evaluation aimed to collect information at the Regional and country levels according to the following study factors:

- The national immunization programme(NPI/EPI)
- EPI MLM training process: steps and pedagogical scenarios
- Results of TNA
- Content of EPI MLM training: structuring and syllabus
- Training materials and tools: relevance, consistency, progression, readability and presentation. Reference documents and handouts
- Target audience
- Attrition and turnover rates
- Organization of teaching/learning: planning, class room instructions, methodology, evaluation, etc.
- Facilitation/teaching team: profile, experience in facilitation
- Administrative arrangements: schedule, venue, meals, accommodation, transport, secretarial support, etc.
- Evaluation system: diagnosis, formative, summative
- Outcome Measurements: participants satisfaction index on course components users and supervisors' perceptions (satisfaction index); effects and impact on immunization coverage and incidence of VPD

- Methods used to follow-up participants after the MLM courses
- Cost implications
- Partner support and sustainability of MLM training

#### **1.4.4 Evaluation Methods and data collection tools**

The methods of the evaluation were as follows:

- Extensive desk review of the information on inter-country and in-country EPI MLM courses held during 2000-2004;
- Review of MLM syllabus at regional and country levels;
- Review of AFRO MLM modules, related reference documents and handouts;
- Visits to countries by evaluation team members for qualitative data collection and analysis;
- Series of Interviews with MLM course participants, facilitators, supervisors as well as MOH officials, country-based partners and other stakeholders;
- Focused group discussions (FGD) with course participants and facilitators;
- Questionnaires and observation forms;
- Preparation of tools and instruments (interview questionnaires, files, printed or electronic materials, etc.) to facilitate the work of external evaluation team

#### **Limitations:**

- The country visits were limited to 5 days per country for briefing, desk review, field visits, individual interviews, FGDs, report writing and feedback to ICC. Therefore there was limited time for interviews with MLM course participants, facilitators and supervisors/beneficiaries.
- Due to other commitments and conflicting dates, some key partners could not provide an external evaluator for each country to be visited.
- Another source of bias was related to the selection of sites within the countries to be visited. Due to limited time, evaluation teams selected those sites which could be covered during the same day or at least in a two-day period.

### Key MLM Evaluation Indicators

The following indicators were used as proxies for various components of the MLM training in the African Region:

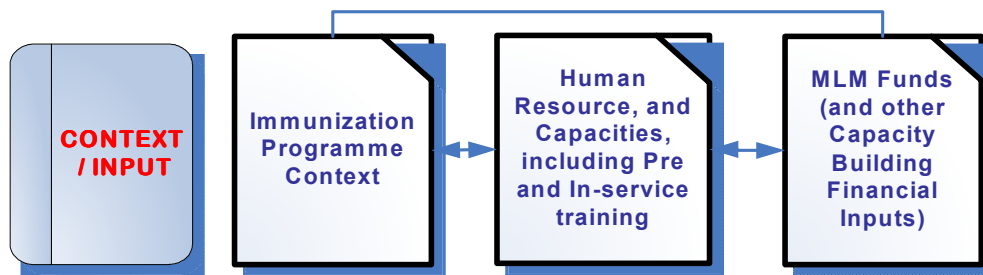
- **No. of TNA recommendations implemented**
- **No. of facilitators trained at TOT sessions**
- **No. of EPI managers/other health workers/WHO and UNICEF focal persons points/teachers/professors trained per course**
- **Proportion of participants from district level trained**
- **Satisfactory index per module/per course/overall SI**
- **Tracking of participants: Attrition and Turnover rates**
- **No. MLM participants with improved job performance.**
- **Partner support: financing MLM/participating in MLM courses**
- **Estimated cost per MLM course/per course participant.**

#### 1.4.5 Structure of the Report

The structure of the report is based on the Evaluation Framework shown in Fig.1. It consists of an Executive Summary, Parts I-IV and annexes. **The PART I- Introduction** provides essential information on objectives, methods and study factors and the framework of the evaluation as well as the rationale for conducting it. **PART II** refers to the **context** in which MLM training has been developed: training strategies, the situation of pre- and in-service training and training needs assessments in African countries. **PART III** represents main findings of the evaluation incorporating results of internal and external evaluation: overview of MLM training process, tools and materials, training outputs/impact and collateral benefits. **PART IV** includes conclusions and lessons learnt from the organization, implementation and follow up of MLM training, its strengths, weaknesses/challenges and opportunities it offers. The report ends with recommendations to improve MLM training in the African Region and the way forward for the period 2006-2010. Starting from Part II, the flow of the text follows topics in the boxes extracted from the training evaluation framework. The bullet titles under the boxes are the sub-topics elaborated in the body of the report.

## Part II – MLM Context and Training

## 2. Context and Inputs of the EPI Mid-level Management Training



- Training Strategy, Health System and External Environment
- Capacity Building: Pre and In-service Training
- MLM Design and Resources

### ***2.1 Training Strategy, Health System Context and External Environment***

The African Region continues to bear a disproportionate burden of vaccine preventable diseases due to slow progress in immunization coverage. Major reasons cited for this were under-funding, low political commitment and weak management capacities at different levels. Working with other partners, AFRO has been utilizing the comparative advantages of the accelerated disease control, specifically polio eradication and measles control, and, the support offered by the Global Alliance on Vaccines and Immunization (GAVI) to broaden the immunization agenda and overcome the challenges towards improvement of the health of African children.

#### **2.1.1 African Region Capacity Building Strategy for Immunization Programme**

From the 1980s until 1995 (training pre-stagnation or UCI period), EPI training in the African Region was provided vertically and it basically covered specific areas of the programme (e.g. immunization schedules, contraindications to immunization, how to increase coverage, logistics, the cold chain, etc.). This training has always been ad hoc, to meet immediate needs. The training in this period has been neither integrated nor comprehensive. More importantly there were no training materials tailored to the regional needs or adapted to the socio-cultural context of the countries.

### *Revisiting the EPI training process*

In the African Region EPI Strategic Plan of Action 2001-2005 the capacity building and training were included among “major areas of action”. The plan indicates that the training should be seen as an entry point of all reforms and innovations within immunization programme. It further elaborates that the training in immunization must always remain support action to quality service delivery. Pre-service and particularly in-service training needs to be strengthened. Trainers, educational materials, pedagogic scenarios and research should be supported.

The review of EPI training status in AFRO served as a foundation for the development of a comprehensive programme with the following components to be elaborated in the process:

1. The immunization policies, strategies, action plans and standards.
2. Realistic objectives based on the analysis of the following needs in programme management:
  - Orientation of recently recruited (or promoted) EPI personnel;
  - Implementation of new strategies (e.g. NIDs, RED, GIVS);
  - Introduction of new vaccines and technologies;
  - Performance gaps observed during supervision;
  - Needs to maintain and enhance skills (e.g. needs for refresher training).
3. Standardized training materials that were updated and adapted to the socio-cultural context prevailing in the African Region.

### **2.1.2 Regional training strategy implementation**

Based on the above directives, Capacity Building Unit at AFRO formulated the strategies for the development in training and entered into implementation phase. This includes the following four interrelated consecutive actions which have been evaluated during this current exercise.

**Table 1a: Status of Strategy Implementation**

<i>Strategy</i>	<i>Strategy implementation</i>
<p><b>a. Analysis of continuing training needs</b> to determine requirements in (a) pre- and in-service training, (b) target staff to be trained, (c) required tools and training materials.</p>	<p><i>Most of the ground has been covered to implement this strategy.</i> AFRO organized and supported TNAs in 14 target countries. Participation of teachers and professors was increased at MLM courses. Two main courses were identified for adaptation at country level- EPI MLM for management staff (developed by AFRO) and Immunization in Practice for operational level staff (developed by WHO/HQ).</p>
<p><b>b. Preparation of EPI training programme</b> with objectives and structured content, training methods, human and financial resources, training calendar and institutional framework.</p>	<p><i>Fully implemented as regards MLM training.</i> Based on experience and extensive review by inter-country courses participants and facilitators, a well structured MLM course has been developed which has become a generic model for subsequent courses at national level.</p>
<p><b>c. Implementation of the EPI training programmes:</b> comprises the mobilization and management of all the resources, the conduct of training sessions, their monitoring and supervision</p>	<p><i>Fully implemented as regards MLM training</i></p> <p>The organizational aspects satisfy both geographical (conducted in all 4 ICP blocks) and language criteria (conducted in three official AFRO languages). All inter-country courses were well monitored and supervised.</p> <p>At country level the establishment of a well monitored and updated training database is needed: a challenge for national programmes and partners</p>
<p><b>d. Evaluation of the training programme.</b></p> <p>This strategy covers all aspects relating to the process, results and the impact of training courses conducted. It also concerns the trainers, the programme itself, course materials and tools.</p>	<p><i>Fully implemented as regards individual MLM training courses.</i></p> <p>However there has not been a summative evaluation of the programme which is the TOR of the current evaluation.</p>

### **2.1.2: Status of Strategic Activities / Actions**

The capacity building strategic plan suggested a number of activities within WHO/AFRO to reinforce the implementation of the above strategies. The implementation status of these activities was reviewed, with the following results.

**Table 1b: Implementation status of strategic actions**

Proposed actions	Implementation status
1. Creation of the Capacity Building (CB) Unit within Division of Disease Control (DDC), which can integrate immunization into other disease control interventions	<p>-CB position has been created at VPD Unit/AFRO.</p> <p>-An integration Task Force with training Sub- group was also created to support integrated training.</p> <p>-CB/VPD developed a number of tools based on integration (e.g. Integrated Supervisory Checklist for District and Central level supervisors).</p>
2. Collaboration with AFRO HRH Unit in the development of national capacity building plans	Immunization CB plans were one of the co-products of EPI/MLM courses. Almost all countries in the Region have developed training plans most of them converted into CB plans.
3. Creation of a CB position within the AFRO ICP teams to support integration at the sub-regional level (Epidemiological Blocks)	No specific positions for CB have been created in ICPs; however, there were two officers (in Abidjan and Nairobi) who were coordinating CB activities for all AFRO Epidemiological Blocks.
4. Designation of a CB focal point within the EPI national staff	At country level ICC is coordinating CB activities. Some National Immunization Programmes have very few staff to appoint or to designate CB focal point, and they rely on HRH Department of MOH to promote CB activities in immunization
5. Designation of a polyvalent supervisor for immunization at district level	At district level there were district supervisors that cover several homogenous programmes including EPI. In some countries an EPI district focal person exists.

## ***2.2 The Training Needs Assessment***

In order to enhance the performance of national immunization programmes, UN Foundation and NESI funded a project to conduct Training Needs Assessments (TNAs) in 12 target countries (Cameroon, Madagascar, Malawi, Mali, Niger, Nigeria, Democratic Republic of Congo (DRC), Senegal, Tanzania, Uganda, Zambia, and Zimbabwe)<sup>1</sup>.

The study populations included planners and managers at national and sub-national levels, EPI focal point persons at regional district and hospital levels, supervisors and health workers, trainers and trainees in pre and in-service training institutions. Data was collected using semi-structured interviews based on a tool developed by WHO AFRO, as well as through focus group discussions, workshops, observation at service delivery points and a desk review of records including the EPI training curricula.

<sup>1</sup> Mutabaruka, E, Nshimirimana, D, Goilav C, Meheus, A - EPI Training Needs Assessment in 12 African Countries, 2002 – 2004, Communicable Diseases Bulletin for the African Region, Vol 3, No 2, June 2005

Previous EPI training initiatives have targeted a wide range of personnel which varied by country but generally included staff at the national (central), regional (intermediate), district and peripheral levels, and Non-medical personnel such as school teachers and religious leaders. Previous EPI training included mainly MLM courses, TOT workshops, and preparatory courses for measles campaign, NIDs for polio eradication, social mobilisation, orientation on disease surveillance and NPI orientation. The majority of the facilitators at EPI training sessions included WHO technical staff, technical staff of District Health Management Teams (DHMTs), etc.

For the majority of both pre-service and in-service training institutions reviewed during the TNA, EPI content was either not outlined in the curricula or the content was incomplete or outdated. In some countries (e.g. Madagascar), EPI was outlined in the curricula but the content was inadequate or outdated. Training schools generally lacked demonstration equipment for EPI practical lessons. Equipment such as vaccine carriers, ice packs, vaccine monitors, immunization monitoring charts and thermometers were generally not available. Current EPI reading and didactic teaching material were often unavailable or the available materials were not adequate. In some cases, available reference materials were old editions without current information on EPI. Although some institutions had adapted WHO MLM modules, others were not on the WHO mailing list for receiving updated information on EPI.

Allocation of hours to EPI theory varied widely depending on type of training programme and level of tuition but generally ranged between 2 and 10 hours. Although practical sessions were an integral part of the pre- and in-service programmes, their duration on immunization also varied widely ranging between 1 and 12 weeks for in-service programmes while for pre-service programmes the range was wider, 1-20 weeks. Some of the training institutions lacked transport to facilitate outreach attachment for students as well as the supervision of the students on attachment.

A few tutors and lecturers have received recent EPI training while the majority have not attended any EPI workshops and as such lack knowledge on current EPI principles and practice.

In all the countries assessed, a variety of short courses were organised for health workers at central, intermediate and peripheral levels as part of continuous training. In some countries, the training curriculum for operational level staff was not well developed. Knowledge and skills on current EPI theory and practice were generally lacking (including basic operational aspects of immunization services). Immunization reference materials were not available at most health facilities and demonstration models and audio-visual aids were also lacking.

Among new unmet training needs, the most common was the need to have the curricula reviewed in order to incorporate modern EPI theory and practice. Operational areas for which training needed to be strengthened include vaccine needs assessment and forecasting, new vaccines, immunization schedules etc. The need for EPI reference materials was also universal being priority in pre-and in-service training institutions as well as at service delivery points. Specific recommendations based on the findings of the assessment were made targeting pre-service and in-service training institutions, health service delivery institutions, ministries of health and EPI units, and EPI partners.

Based on country TNA results:

- The pre- and in-service training in the EPI management were prioritized.
- Participation of teachers, professors increased in MLM courses.
- Two main courses were identified for adaptation at country level: EPI MLM for management staff (developed by AFRO) and Immunization in Practice for operational level staff (developed by WHO/HQ).

The cost-effectiveness of TNAs as well as implementation of TNA recommendations at country level are still to be carried out by AFRO and country EPI staff.

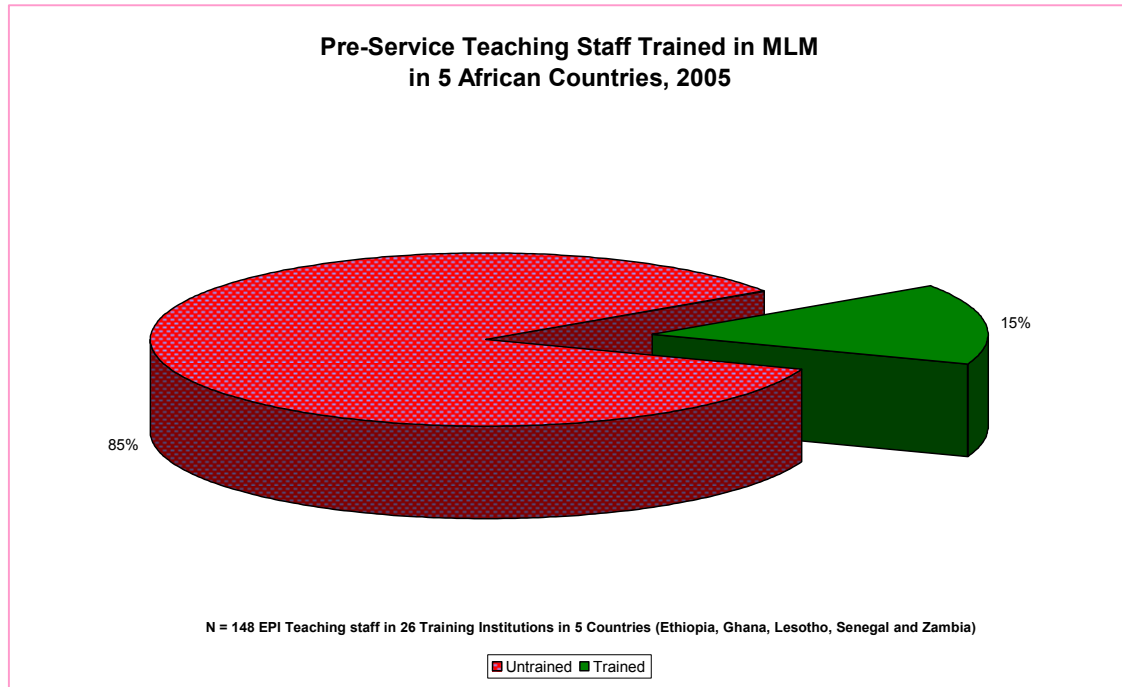
## ***2.3 Capacity Building: Pre and In-Service Training***

### **2.2.1 Training in immunization at country level**

#### **2.2.1.1 Pre-service training:**

The evaluation team visited a number of pre-service training institutions in the selected countries and had interviews with the principals and the teaching staff. These visits revealed inadequacies both in theoretical content and practical exposure to immunization, as well as in availability of relevant training materials, tools and reference materials. These observations from 26 training institutions visited were in line with TNA findings in other countries of the African region.

**Fig. 2: Pre-service Teaching Staff Trained in MLM in countries visited**



The figure above suggests that there is a serious inadequacy in training of tutors in immunization as only 15% of them (of whom 90% were from Zambia) had MLM training. The situation appears to be severe in Ethiopia, Ghana and Lesotho where only 2 out of 93 tutors involved in EPI teaching were trained.

To illustrate the extent of awareness of teachers about modern immunization policies and technologies, evaluators carried out an assessment using scoring method as described in the Table 2. The assessment was done in the process of focus group discussions (Ethiopia, Zambia) and as a self-assessment (Lesotho). The Table 2 shows that out of 35 responses to 7 questions, 28 answers (80%) were scored as “Poor” or “Fair” and only 7 answers were rated as “Satisfactory”.

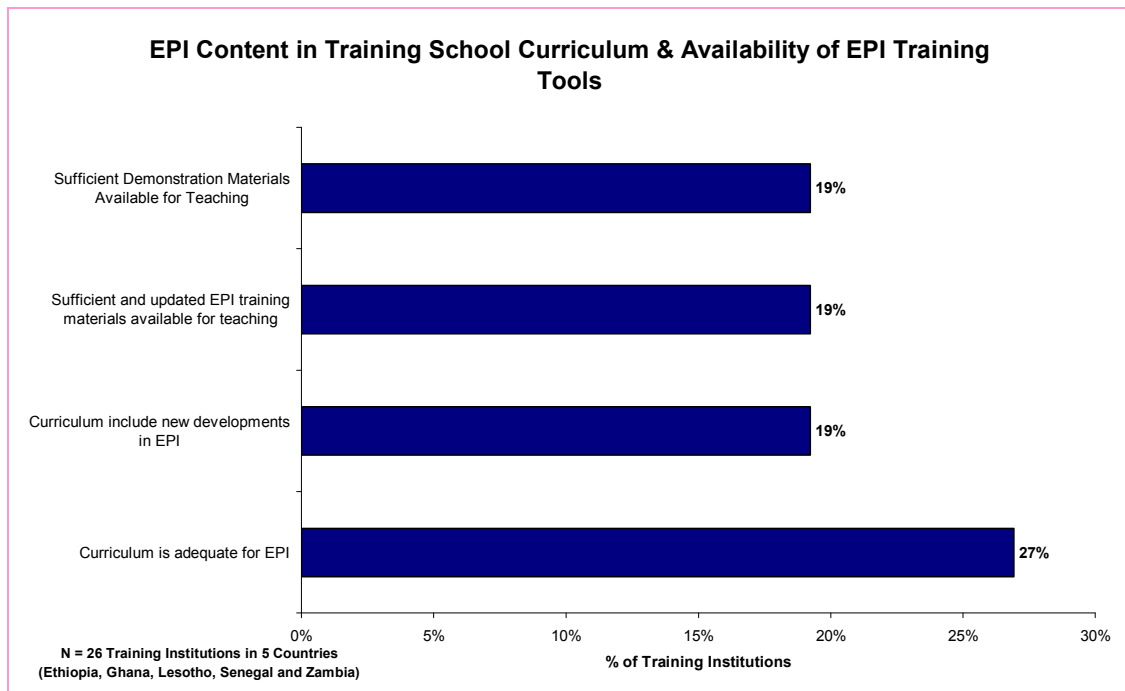
**Table 2: Assessment of tutors' awareness on EPI**

EPI topics on policy changes and new technologies	Awareness of tutors by scoring 1-3 (1-for poor; 2-for fair; 3- for good)				
	Ethiopia (based on FGD with EPI MLM course facilitators)	Lesotho (School of Nursing- self assessment by a Senior tutor who attended Windhoek EPI MLM course in 2002)	Zambia (based on FGD in 3 training schools)		
			Lusaka School of Nursing	Livingstone School of Nursing	Chidankatu School of Nursing/ Midwifery
-EPI schedule with new vaccines	1	3	3	2	3
-Open vial policy	1	1	2	2	2
-VVM	1	2	2	1	2
-Shake test	1	1	1	1	1
-AD syringes	2	2	2	1	3
-AEFI	2	2	1	2	3
-Disease elimination initiatives	1	3	2	3	1

The figure below indicates serious gaps in EPI teaching by pre-service institutions:

- Only 7 out of 26 training institution reviewed mentioned that the curriculum is adequate for EPI teaching.
- Only a few (5/26) had a curriculum with a new developments in EPI.
- Less than 20% of training schools had sufficient teaching materials, reference books and had access to EPI publications.

**Fig. 3: EPI content in Training school Curriculum and Availability of Training tools**



The perceived training needs analysis above shows that training institutions were aware of the problems they were facing and could overcome them provided resources are availed and there is a commitment by the MOH, management of the schools, national regulatory authorities and partners in immunization.

**Table 3: Perceived training needs**

Perceived Training Needs	Country
<p><b>a. Common perceived needs in teaching on immunization</b></p> <ul style="list-style-type: none"> <li>- Provision of updated training materials on immunization (modules, CDs; standardized course outlines and handouts)</li> <li>- Provision of reference materials (books, journals, newsletters, etc.)</li> <li>- Provision of demonstration materials on EPI: vaccines, diluents, vaccine carriers, AD syringes, thermometers, immunization monitoring charts, etc.</li> <li>- Training of more teachers in EPI MLM courses</li> <li>- Regular updating of teachers by EPI Unit technical staff; orientation workshops on EPI</li> </ul>	<p>All Countries visited</p>
<p><b>b. Individual perceived needs in teaching on immunization</b></p> <ul style="list-style-type: none"> <li>- Curriculum review to include modern EPI content in a structured manner</li> <li>- Internet connectivity; audio-visual equipment</li> <li>- Formalized/regularized interaction with EPI service providers</li> <li>- Increase the number of EPI materials in the library</li> <li>- Provision of transport for students practical/outreach sessions</li> </ul>	<p>Lesotho</p> <p>Lesotho, Ghana</p> <p>Ghana</p> <p>Lesotho</p> <p>Zambia</p>

### **2.2.1.2 In-service Training**

The review of the Expanded Programme on Immunization in all visited countries identified the need for training of service providers as a crucial issue at different levels. Areas such as analyzing locally collected data, using information for decision making and action, technical issues related to target setting, monitoring and addressing dropout rates, and new policies on vaccine use and immunization safety, etc., were the main concerns. Various training and orientation opportunities have been conducted as described below.

Some of the staff benefited from the training conducted in preparation of SIAs. For example, in preparation for measles campaigns during 2000-2004, health workers were trained in injection safety and use of AD syringes. In addition, training in reporting and logistics was conducted for the polio NIDs and SNIDs. The training on vaccine stock management for district and health facility levels is ongoing.

Another opportunity that has been used in boosting training is the introduction of new vaccines into the EPI in pentavalent or other formulations. Public Health Nurses, Disease Control Officers, DHMTs, and other health staff from districts attended orientation workshops and short courses on storage of new vaccines vaccine, distribution and administration. In addition, many national/sub-national surveillance officers were trained on surveillance of target diseases.

The Reaching Every District strategy, with countrywide roll-out and a particular focus on selected hard to reach districts also facilitated training of health personnel at district level.

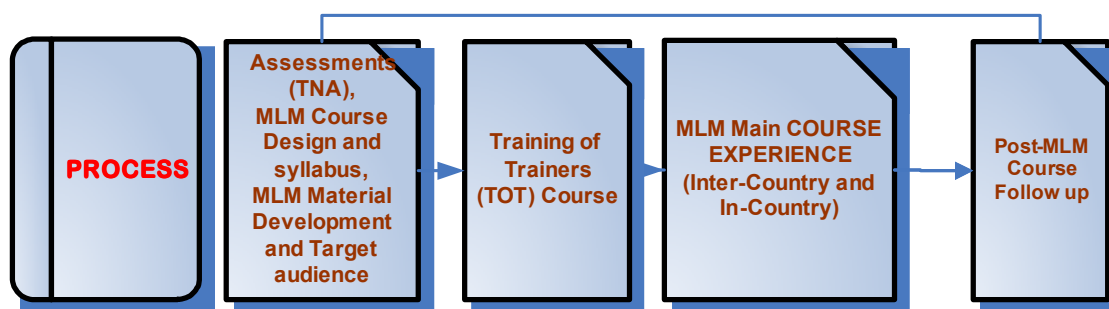
The evaluation teams observed, however, that non of the EPI Units in reviewed countries had or have access to updated data base on training to capture details of training activities at national as well as other levels of the health system. For example, the teams were not able to collect reliable information on courses held at provincial/regional/zonal or district levels concerning the number of courses, participants and facilitators, the cost and source of funding, etc. The Table 5 below summarizes information on in-service training activities which was available to the review teams.

With the technical and financial support of WHO, UNICEF, BASICS, CVP/PATH and other partners the programmes have produced and distributed field guides, manuals, and pamphlets on immunization for peripheral health workers to orient them in the field. Some of them incorporate developments in the immunization programme and were a practical tool for improving skills in immunization.

# Part III – MLM Training

## Implementation: Experiences and Results

### 3. MLM Training Process - Target Audience, Course Design and Syllabus, Material Development



- Target Audience
- MLM Course Design and Syllabus, Material Development
- Trainers of Trainer Course
- MLM Main Course
- MLM Training Costs

The EPI Mid-Level Management (MLM) course was originally designed by WHO/HQ during the Universal Child Immunization (UCI) Initiative (1985-90), and it contributed to improvements in programme management and quality. However with time this training course contents became outdated. In addition, external support and resources to the programme diminished and the MLM courses frequency dropped considerably. In fact, between 1994 and 1999 there were no MLM courses in the African region.

#### ***3.1 MLM Course Overview and Justification***

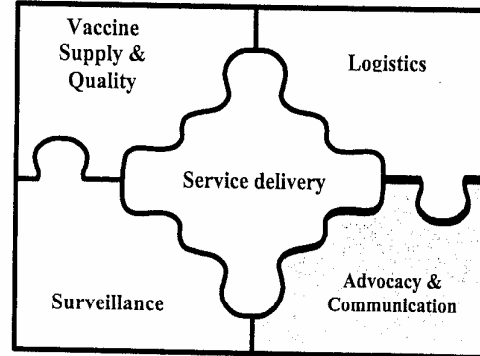
The reduction in capacity building was reflected in the 1996 Global EPI training evaluation and 1998 Regional EPI evaluation reports, both of which strongly recommended revival of management training in Africa. The same was confirmed by various country EPI assessment missions indicating apparent management failures in the national immunization programmes especially at sub-national levels.

To overcome the above problems in the management training, AFRO, in collaboration with WHO/HQ and UNICEF, developed a 5-year MLM training proposal which was submitted to UNF and USAID in 1999 and was approved for implementation during 2001-2003 (later extended to Feb 2005).

Some of the specific justifications for the MLM training were as follows:

- ◇ The recommendations of the 1998 and 2003 Regional EPI Review reports clearly prioritized training and requested the WHO Regional Office to carry out training needs assessments, , and develop ongoing plans for initial and refresher training in the context of integration.
- ◇ The high rate of development of innovations and new technologies in immunization requires regular updating of knowledge of staff to cope with strategic changes and technical advancement in the programme.

**Fig 4: Operational Components of Immunization**



- ◇ There was a need to have a comprehensive training material which covers all operational components and foundation elements of immunization services shown in Fig. 4 and 5.

- ◇ The “Reaching Every District” (RED) strategy as adopted by GAVI partners and by the 10<sup>th</sup> Task Force on Immunization (TFI) in Africa provides a real opportunity to reach at least 90% DPT-3 coverage at national level and 80% in each district in all countries by 2010, in line with the UN General Assembly Special Session (UNGASS) recommendation. This requires intensive training of national staff in management, supportive supervision and programme monitoring.

**Fig 5**  
Foundation Elements of Immunization Programmes



- ◇ The recent WHO document on the strategic framework for 2005-2015: Global Immunization Vision and Strategies (GIVS) take immunization beyond infants into other age groups, while maintaining the priority of early childhood vaccination. This new strategy anticipates further introduction of new vaccines (such as vaccines against malaria, HIV/AIDS, tuberculosis and others) and technologies, all of which will require new skills from health workers and managers for implementation through intensive training.
- ◇ GAVI application process is another challenge for the EPI managers. To ensure GAVI support, programmes should meet some requirements in relation to immunization data management and accountability which demand a high level of managerial skills.
- ◇ As a result of increased turn over of senior health cadres at country level, there were many new appointments as national EPI managers, who were not fully familiar with the EPI and do not have skills to manage the programme effectively.

- ◇ Most of the national programme reviews and training needs assessment missions indicate that there were serious bottlenecks in and between pre-service and in-service training, one of them being not trained teachers in modern EPI theory and practice as well as lack of updated reference materials. .

In view of the above situations and based on decisions of the WHO Regional Committee (AFR/RC52/9, 2002) as well as 1998 and 2003 Regional EPI evaluation results, AFRO intensified efforts towards MLM training. ***During the past 5 years (2000-2004), 11 inter-country MLM courses were conducted by AFRO and 364 EPI managers, 61 teachers/professors and 79 WHO/UNICEF EPI focal persons were trained.***

The first piloting of these modules was done in Niamey, Niger (2000) and Abuja, Nigeria in 2001. That was the beginning of a long journey of revisions and re-revisions of MLM course modules until 2003, and ended up with 14 key MLM modules completed, and translated into 3 official languages of the African Region (English, French and Portuguese) by 2004.

### ***3.2 Target Audience***

The following subsections describe the MLM training process as illustrated in the Fig 6 below. The mid-level management course modules and reference materials were intended mainly for managers of immunization programmes at national, regional and district levels. It is obvious that all levels of the national health system require various degrees of management skills to support the delivery of immunization services. However, MLM training placed emphasis on the national, regional/provincial and district level personnel. Specific target groups at these levels include EPI Managers, National Regulatory Authority staff, Logisticians, Cold Chain Officers and central level storekeepers, supervisors at various levels and other beneficiaries. The later includes training school teachers, professors as well as country-based staff of interested partners.

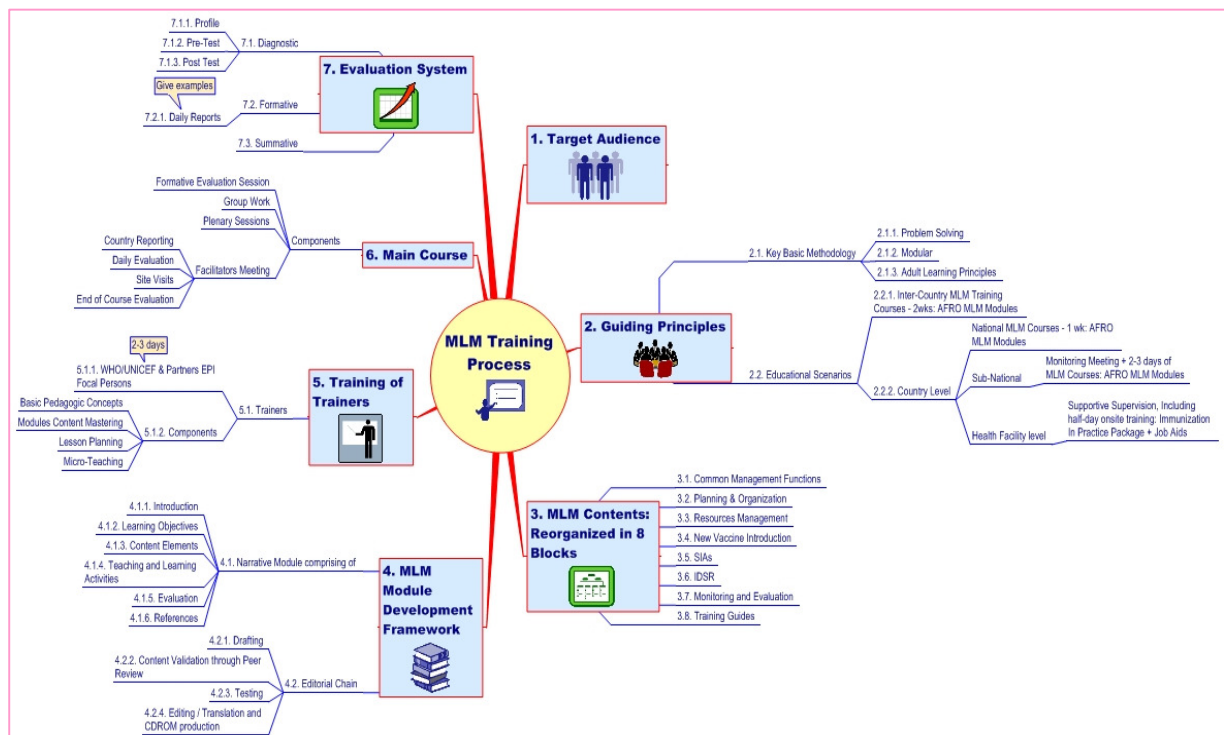
For some countries that included health facility staff in MLM courses the evaluation team recommends that the health facility staff should be considered as a target group for the Immunization in Practice (IIP) course. The course administration generally included MLM Course Coordinators (MOH, representatives of partner organizations), local organizing committees, MLM Course Director and the secretarial support team.

### 3.3 MLM Training Concepts / Principles

Several concepts were used by AFRO in the development of the MLM course.

- **Problem solving** concept - to equip EPI managers with skills to overcome constraints in their day to day work.
- **Modular approach** in presentation of EPI content – to ensure high flexibility in the use of the modules individually or in multiple combinations depending on availability of time or immediate needs of the programme.
- **The “blocks”** - to conceptualize generalities among various areas in the programme and to reflect sequential management functions within the specific block (e.g. monitoring-supervision-assessment in the Block “Monitoring and Evaluation”).
- **Linking MLM with health services.** This was a leading approach in the development of the course ensuring that its content is responding to the health services needs.

Fig. 6: MLM Training Process



### ***3.4 Training Methods and Techniques***

As indicated earlier, the problem-solving approach is the basis of the methods and techniques used in all the training activities of the MLM course. This course also made use of other participatory methods, such as short audio-visual presentations, group discussions, application exercises, role-playing, simulations in the form of field visits and other methods.

Discussions constituted the main method of interaction among participants as well as with the facilitators. Discussion techniques such as brainstorming, discussions in small groups, tutorials and nominal group techniques were widely used throughout the course. Application exercises were proposed in virtually all the modules. Some of the modules, especially that on logistics management and cold chain also involved demonstrations.

The working methods during the course included a daily presentation of formative evaluation results of the previous day (1 hour), an introduction to the new topic, a short presentation and clarification of issues (1-1.5 hours), group work (2-2.5 hours), plenary to make group presentations followed by general discussion and a summary or wrap up presentation by facilitators (1-1.5 hours). Usually two modules were covered during a working day. A country team is assigned to report on the daily progression of the training.

There were regular facilitators' meetings at the end of each working day to review all aspects of the training workshop for the day and outline the tasks for the next day. There is a major facilitators' meeting at the end of the course to finalize the results and review the main achievements of the course.

Reviewing the evaluation reports of the MLM courses and having interviews with participants, the evaluation team noted that some of the above methods were not systematically or effectively used in all courses, e.g. field/site visit to nearby clinic to observe an immunization session was not usually included in the programme of national/provincial courses due to short period of the course. However, the course in Ghana succeeded in organizing field visits. Participants in Ethiopia, Zambia, Lesotho and Senegal did not have site visits and considered it as one of the problems in the organization of the MLM training.

Due to large groups in some inter-country and national courses, the effectiveness of group discussions was reduced. Most of the participants interviewed did not have opportunity to enter into individual discussions with facilitators.

#### ***Course Duration***

AFRO and countries find it inconvenient to hold MLM course (including TOT session) with duration of more than two weeks, avoiding long absence of the health worker from their workplaces.

With this in mind, a common decision has been taken by GAVI partners and AFRO to establish the following course duration for various courses within EPI:

- ◇ For Inter-country MLM courses- 2 weeks;
- ◇ National/provincial level MLM courses- 1 week;
- ◇ District level EPI workshops - 2-3 days;

- ◇ Health facility level training- ½ day during supportive supervision.

The evaluation team observed that in general the duration of the inter-country and in-country MLM courses were consistent with the above limits.

### ***3.5 Course Objectives, Contents and Syllabus***

*The general objective* of the MLM course is to improve managerial competence of EPI managers in order to effectively contribute to the achievement of immunization goals in their respective countries.

*The specific objectives* of the MLM inter-country and national courses were:

- To make EPI managers aware of their role within the context of ongoing health sector reforms and 2001-2005 Regional EPI Strategic Plan;
- To enable EPI managers to manage immunization systems' operational components and supporting elements within a changing environment;

Several courses had the following ***additional objectives*** related to specific tasks:

- Validate and test EPI MLM modules;
- Elaborate national training plans of participating countries.

The recent courses conducted in 2004-2005 provided a platform to accelerate the implementation of the RED strategy and create awareness on Global Immunization Vision and Strategies (GIVS).

The syllabus of the MLM training course is based on the above objectives which will enable immunization managers at all levels to acquire skills in relation to foundation elements of immunization programme: management, human resource strengthening and sustainable financing. The course content of the inter-country and most of the national MLM courses also covers immunization operations such as service delivery, the cold chain and logistics, vaccine supply and quality, disease surveillance and communication in support of the programme.

The intermediate course proposes a general framework for resolving problems encountered in the EPI. In more concrete terms, its contents assist to develop managerial skills, particularly in the following areas:

- EPI management with emphasis on the role of EPI manager
- Communication and mobilisation in support of immunisation
- Development of annual and multi-annual plans
- Management of logistics, the cold chain and vaccines
- Strengthening routine immunization
- Injection safety and sharps disposal
- Supportive supervision
- Organisation of National Immunisation Days (NIDs)
- Integrated disease surveillance

- Introduction of new and under-utilised vaccines
- Monitoring and evaluation of immunisation services.
- The evaluation team reviewed the above content of the syllabus of the EPI MLM course and found it exhaustive. It addresses the key management issues and incorporates the current and future challenges of the immunization programme.

### ***3.6 MLM Modules and Material development***

#### **a) Course materials for AFRO Inter-country MLM Courses**

The 1991 EPI global MLM modules were not adapted to the needs of the African Region. The review of the modules for mid-level staff was also justified by the various changes and innovations in the health sector and EPI itself influencing the immunization policies and practice. Initially it was planned to develop all the 25 modules of MLM course (expanded MLM modules option). However, in view of practicalities (availability of resources, country and partner priorities) 14 key modules (core modules option) were developed. This was also agreed upon during EPI Training and Partnerships meeting held in Geneva in 2001.

As a result of pressure during 1999-2000 coming from the country programme reviews and EPI managers themselves, the need for revision/development of mid-level management course has become apparent. In developing the course, AFRO used 1991 global MLM course materials, other sources on general health management as well as new updated reference materials from Internet.

#### ***Grouping of MLM modules***

The MLM course for EPI managers consists of 25 modules divided into eight blocks. To suit various situations that countries may present, these modules were reorganized into two main categories: Expanded Modular Blocks which includes all 25 modules of MLM course, and Selected Core Modules, which includes 15 key priority modules, the rest being considered as additional reading material along with the reference documents.

AFRO translated the modules into three languages (English, French and Portuguese) and burned CD ROMs for the English and French versions. The modules are also available in Microsoft Word format – suitable for users who may wish to access, copy, edit or print the texts. This is specifically arranged by AFRO to enable countries to adapt the course to their needs. CDs have been distributed to national EPI managers and EPI focal points throughout the Region, and were provided to each participant during the inter-country course.

## Reference Materials

AFRO has developed a comprehensive list of reference materials to accompany the MLM course. This list is included in the Introduction Module. This module also provides recommended references for each block. Some of these materials were available during the course, others can be downloaded from the Internet using the specific WHO or other websites (e.g. [www.who.int/vaccines-diseases/epitraining](http://www.who.int/vaccines-diseases/epitraining)).

### b. Course materials developed by countries visited

Some regional courses used only 4-5 MLM modules but added several important topics to the programme such as accelerated measles control, neonatal tetanus elimination, immunization safety and others.

**Table 4: Modules selected or Adapted for in-country MLM courses**

<i>Country</i>	<i>MLM Modules or Adaptations</i>	<i>Other EPI Courses Materials developed by countries</i>
<i>Ghana</i>	With technical and financial support from the partners (WHO, UNICEF, GAVI, and Glaxo Smith Kline), the EPI Unit initiated the adaptation of the seven AFRO EPI MLM modules for use at national and regional/district level courses. The draft modules were reviewed by the EPI managers during the first national training course. The first edition was published in February 2002. For the national MLM course (Accra), the programme used the 7 priority modules (Table 7)	-Field Guide for the Ghana Immunization Programme-2003; -Mid level Management modules (5 modules) adapted from AFRO generic modules
<i>Ethiopia</i>	The programme used 14 AFRO priority modules for national MLM courses. During the regional training, the AFRO produced CD was used by facilitators. It was not duplicated to participants. Due to time constrain, no other reference materials were used during the training.	EPI Manual for Health workers
<i>Lesotho</i>	AFRO 12 priority MLM modules were used at Berea course. The AFRO produced CD was used by facilitators. It was not duplicated to participants. Due to short duration of the course, no other reference materials were used during the training.	Manual on Hepatitis B for Health Workers
<i>Senegal</i>	The programme used 14 AFRO priority modules for the national MLM course. Reference materials included supervisory checklists, EPI data management tools, national communication plan for EPI and others	Immunization Guide developed by EPI/Senegal -Immunization Guide developed by WHO/ICP Abidjan
<i>Zambia</i>	The programme used 14 AFRO priority modules for national MLM courses. Other resource materials such as AFRO EPI Planning Guide, AFRO EPI Strategic Plan, 2001-2005 were distributed to participants	Vaccination Manual, revised in 2000 and 2002 to include new vaccines and other developments in EPI

*Note: A rapid review conducted by the evaluation team found the content of the modules satisfactory in general. However, a few inaccuracies were observed, which will hopefully be addressed during the subsequent editions of these modules.*

### 3.7 MLM Course Design

The design of the AFRO MLM course is generally based on three pedagogical approaches: learner-centered, mastery learning and adult training (andragogy) approaches.

**Table 5: MLM Course design patterns**

Type of approach	How course design is responding to it
<b>Learner-centered approach:</b> according to individual needs of learners	The course participants may have various backgrounds (new and experienced EPI managers, EPI focal points from sub-national level, professors, teachers etc.). The course therefore offers various options of issues, exercises, interpretations which can satisfy different needs. In addition, by recruiting experienced facilitators, the learner-centered approach has been utilized during group discussions or individual discussions between participant and the facilitator.
<b>Mastery learning approach:</b> all participants can master (learn) the required knowledge	This approach is cross-cutting throughout the course and supported by exercises, role plays, individual and group discussions, question-answer sessions during plenary, demonstrations, practical sessions, informal meetings with participants, and daily evaluation reviews by facilitators etc.
<b>Adult learning approach :</b> participative, practical, competence-based training	This is mainly achieved through excessive use of problem-solving techniques, group discussions, practical sessions and demonstrations. Some exercises and role plays also contribute to this approach as they were based on real situations prevailing in the countries of African Region (symbolically called AFROLAND).

#### ***MLM Course design application at country level***

The external evaluation team looked into implementation of the above approaches at country level. In general the above elements of the MLM course design were replicated in the national courses with various degree of success.

***Learner-centered approach according to individual needs of participants:*** there were two different opinions regarding this issue. Some participants found (Ethiopia, Ghana) that the difference in participants' exposure to EPI by EPI managers and tutors at training institutions affected the training process as facilitators were obliged to explain the EPI common terms and principles to tutors who were not very familiar with these issues. In their opinion, due to the short duration of national courses, this had a slow down effect on their learning. The other group of participants and facilitators (Zambia, Senegal) recommended that the current trend of having mix of service providers and tutors as course participants should continue to minimize the bottleneck between academic teaching and practical work at health facilities.

***Mastery learning approach:*** all participants can master (learn) the required knowledge. This approach has been successfully implemented at national courses. However, the country

experience shows (Lesotho) that using MLM course in cascade (or step down) training at district level for health facility staff is not suitable due to complexity of the content and large volume of the course. Others indicated that the complex issues need to be explained in a simple way.

**Adult learning approach.** *participative, practical, competence-based training.* The evaluation team’s observations during the field visit (Ethiopia) concluded that this approach is not sufficiently highlighted by facilitators at regional/provincial courses, and that facilitators themselves had limited skills in adult learning methodology. A number of participants from all countries visited indicated that groups were overcrowded affecting participation of all group members in discussions. In most of the countries visited (except Ghana) participants could not have individual discussions with facilitators due to intensity of the course schedule.

### 3.8 Training of Trainers’ (TOT) Sessions

According to the course design, the MLM course has two major components: TOT session and the main EPI managers’ course.

#### Teaching scenarios

Pedagogical content	Pedagogical methods
<ul style="list-style-type: none"> <li>-Mastery learning</li> <li>-Adult learning principles</li> <li>-Problem solving approach</li> <li>-Active/proactive methodology</li> <li>-Modular approach</li> <li>-Module validation</li> <li>-Module testing</li> </ul>	<ul style="list-style-type: none"> <li>-Individual pre-reading</li> <li>-Short presentations</li> <li>-Plenary/group discussion</li> <li>-Case studies</li> <li>-Practical exercises</li> <li>-Role play</li> <li>-Simulation</li> <li>-Project method</li> </ul>

#### Target audience/beneficiaries

- Experienced EPI Managers
- WHO and UNICEF EPI focal points
- Lecturers and teachers from training institutions

#### Objectives of the TOT sessions

- Master basic psycho-pedagogical concepts in EPI training
- Explain modular approach applied to MLM course
- Review educational objectives of MLM modules
- Select/use pedagogic methods appropriate to each module
- Harmonize educational materials with selected teaching methods
- Conduct MLM lesson planning (needs, objectives, content and exercises, methods, media selection, evaluation design and tools, lesson plan, lesson outline)
- Conduct effective micro-teaching related to EPI MLM modules

- Prepare and conduct an evaluation of tools appropriate to each MLM course module.
- Have a clearly defined lesson plan to use in the main course.

As a result of TOT sessions, 161 WHO, UNICEF EPI focal points and EPI managers were trained to be able to facilitate in future MLM courses at sub-national, national and regional/ICP levels. Some of these trainees were “employed” as facilitators for the EPI managers’ course which followed the MLM session.

**Table 6: Training of Trainers (TOT) session results**

MLM Course	TOT course Duration (days)	Trainers	Facilitators trained
Niamey- 2000	6	10	9
Abuja- 2001	6	11	24
Douala- 2001	6	6	25
Maputo- 2002	4	6	7
Windhoek- 2002	3	11	21
Dakar- 2002	3	8	19
Pretoria- 2003	2	16	11
Benin- 2003	2	17	12
Cape-Town-2004	2	13	14
Dakar- 2004	2	11	10
Maputo- 2004	2	5	9
TOTAL:	Range: 2-6 days	XXXXX	161

The duration of the TOT session was between 2 to 6 days. The earlier sessions during Niamey, Abuja, and Douala courses lasted longer (6 days) compared with the three following courses (2-4 days). Some participants reacted to this reduction with an argument that a period of 2-3 days was too short to master the entire MLM course with 14 modules and reference materials. As a result of very short exposure to the training materials, in their opinion, the quality of the facilitation by the future facilitators may be compromised.

The internal evaluation has identified several options to overcome this problem:

- AFRO should identify in advance the candidates for TOT training and send them all course materials at least two weeks prior to the dates of TOT session.
- In selecting TOT participants, AFRO gives preference to candidates from the “facilitator’s pool” who had previously co-facilitated MLM courses. This will serve as refresher training for selected facilitator and quality facilitation.
- Facilitation in groups is done by two facilitators, one of them acting as a leading facilitator highly experienced in EPI and teaching techniques.

### *TOT courses/sessions in countries visited*

Training of trainers' sessions in countries followed the patterns of inter-country TOT courses with the similar objectives and pedagogical methods. The duration of the TOT session/course ranged between 1 day (Zambia) and 5 days (Ghana).

Some countries (Ghana, Ethiopia) separated the two parts of MLM training (TOT and the main course) by weeks or months in preparation of the cascade training. The separation, while preventing the health worker to be away from the workplace 1-1½ weeks or longer, may also have some undesirable effects; for example, the facilitator may not be available any longer for the main course. Therefore the evaluation team suggested looking into advantages and disadvantages of the separation in each particular situation.

### **3.9 Course Evaluation options**

This consists of various types of evaluations carried out at different stages of the inter-country or national courses. The course includes, first of all, a **diagnostic evaluation** of the prerequisites and expectations of participants, which is carried out in the form of informal discussions or pretest on a given module.

This course also applies formative **evaluations** of both the learning process and the daily lessons. At the beginning of each lesson, a formative evaluation in the form of a technical report on activities of the previous day is made. Other formative evaluations were carried out in the course of the lesson, particularly through interactions during the synthesis stage. Finally, the activities of each day were rounded up with a global formative evaluation.

At the end of the entire course, a **summative evaluation** using a common format and Likert scale is used to assess the actual assimilation of the course. This includes calculation of "Satisfaction index" based on the assessment by participants concerning various aspects of the course (course materials, facilitation, administrative arrangements, etc.). The threshold level of satisfaction is commonly accepted to be 70% indicating that a minimum of 70% of participants were very satisfied or satisfied how various elements of the course were run or handled.

While all the AFRO inter-country course reports were available and were analyzed in the course of internal evaluation (see the following chapters), only a few national reports were presented to the external evaluation teams. Therefore the calculation of "Satisfaction index" of national course participants were carried out retrospectively based on face to face interviews with course participants.

### ***3.10 Assessment of the MLM course by participants***

At the end of the entire MLM course, a global formative evaluation is carried out in the form of a post-test to assess the achievements of the course and perceptions of participants on the course and their own accomplishments. In some courses the participants were asked to also undertake validation of the modules. This is done using qualitative and quantitative (scoring) methods. The results of this summative evaluation for each of the modules were presented in the tables below.

#### **i. Course Module Validation**

A thorough validation exercise took place in Dakar MLM course in 2002 which resulted in the following self-explanatory comments as regards each module covered by the course (Table 19).

**Table 7: Results of course validation of MLM modules, Dakar MLM Course (2002)**

The validation exercise above provides constructive recommendations for further improvements in teaching.

Topics/Modules evaluated	Comments on the individual modules by participants	Implementation status
1. Introduction	The module induced good participation and contribution.	Noted
2. Role of EPI Manager	Needs clarification of the difference between EPI manager's role and functions. The role, as it is explained in the text, will cause problems regarding integration of activities	The module edited in 2003 with clear definition of roles and functions
3. Communication For EPI	Too folkloric. Action points to be developed for each level with indication of expected results	The module was subjected to thorough changes in 2004
4. Planning Immunization Activities	Long discussions held before proceeding to exercises	During editing, the text and the exercises were harmonized
5. Increasing Immunization Coverage	Good synthesis	Noted
6. Cold Chain Management	Field visit is necessary as well as practical demonstrations	This report makes similar recommendations
7. Vaccine Management	Too methodic. Little time for group work. Use of formulas for calculations not well articulated	The module was edited and improved.
8. New Vaccine Introduction	Lack of experience to exchange. Translate the module into French. Little time for exercises. Post-test is needed	Translation into French is done.
9. Organizing a Measles Campaign	No exchange of experience. Lack of documentation. Insufficient	Reference materials on CDs provide additional

Topics/Modules evaluated	Comments on the individual modules by participants	Implementation status
	understanding of measles epidemiology. Good exercises	information on measles
10.Integrated Disease Surveillance	Allocate a full day to this module. No exchange of experience occurred. Too difficult subject. No specific module provided	Not yet implemented
11.Supervision	Exercises were practical and useful. Insufficient time	Formative aspect of supervision is reinforced in the new version
12.Conducting EPI Assessment	Review and improve exercises and case studies in the module. Make them relevant to our situation. Module is preoccupied with external evaluation and not internal	Editing is done in 2003/4 but the evaluation should always have an external component

### Satisfactory index (SI) on the content and overall assessment of the individual MLM modules

Participants evaluated the content of each module as well as overall satisfaction with the course, with the following results:

**Fig 7: Satisfaction Index for Modules at Inter-country MLM Courses**

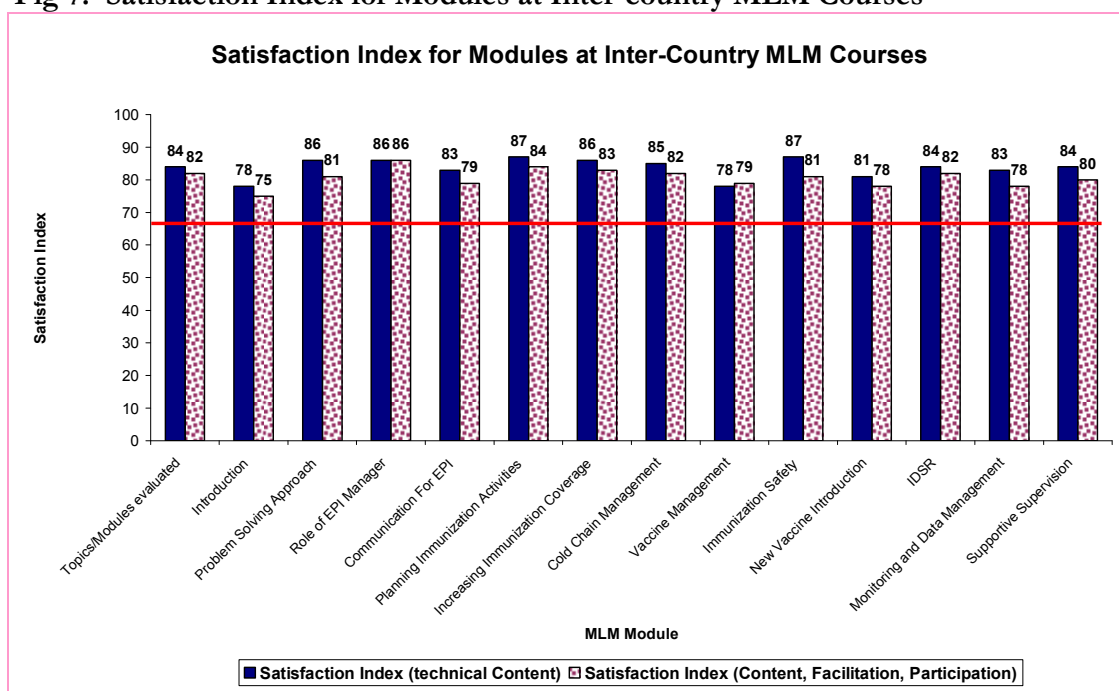


Fig 7 displays a number of interesting results which can be summarized as follows: The average scores for the content of all modules and overall course assessment exceed the threshold of 70% satisfaction. The level of scoring for the content of modules on problem solving, planning and IDSR was not consistent and fluctuated between high and very low

scores. Some of the reasons for low scoring can be found in the validation table. For the IDSR module the most important criticism was that IDSR is a “Too difficult subject” and “No specific module was provided” to facilitate learning.

The content of the module on new vaccine introduction got high scoring indicating EPI managers’ interest in innovations. There were two episodes of “collapse” in scoring for supervision module in Niamey (60%) and for planning module (62%) in Benin courses. The evolution of the supervision module with improvement in translation and content proved to be positive as scoring was dramatically increased during subsequent courses. For the planning module the roots of the collapse may be the allocation of little time to this large module with multiple exercises.

The overall scoring is one of the important indicators in the reaction evaluation of the course expressing participants’ overall impressions on the content, facilitation and participation with regard to teaching and learning of each module. The trend of the overall scoring in the table above is in general comparable with the scoring for the content of the modules (>70% SI).

**Table 8: Highest and lowest levels of Satisfaction Index (%) given by participants to individual and all MLM modules at the end of the course**

MLM Course	Level of scoring	Module title	SI for a specific module/s	Overall SI for all modules
Niamey- 2000	Highest score	Planning Immunization Activities	89	79
	Lowest score	Supervision	60	
Abuja- 2001	Highest score	Planning Immunization Activities	93	88
	Lowest score	Supervision	83	
DOUALA- 2001	Highest score	Vaccine Management	87	82
	Lowest score	Conduct Immunization assessment	75	
Windhoek- 2002	Highest score	Communication for EPI	91	78
	Lowest score	Both IDSR and Problem Solving	72	
Dakar- 2002	Highest score	CC, Role of EPI manager, Increase Coverage, Conduct Assessment	87	85
	Lowest score	IDSR and Introduction of New Vaccines	82	
Pretoria- 2003	Highest score	Communication for EPI, Introduction of New Vaccines	81	77
	Lowest score	IDSR and Vaccine Management	73	
Benin- 2003	Highest score	Conduct Integrated Supervision	86	78
	Lowest score	Planning Immunization Activities	59	

The above table shows that the responses were varying for the same module/s from one course to another. For example, the planning module was scored very high in 2000-2001 workshops but it got the lowest index in Benin (2003). One of the possible explanations is that at the start of acceleration of MLM training, the majority of participants were senior level managers from the central or sub-national levels who liked the module as it responded to their immediate planning needs. With the same token, these senior managers were not happy with the supervision module because the initial version of that module needed

extensive revision and incorporation of integrated and supportive supervision approaches which was done later during the 2002-2003 revisions. As a result of the improvements and adaptation of the module to prevailing situations in the Region (decentralization, integration, RED strategy, etc.), the same module had a higher SI in 2003 at the Benin workshop.

There were concerns about the module on IDSR which were consistently expressed by participants in the Dakar and Pretoria courses. Some of them indicated that the material on IDSR has not been harmonized with other MLM modules, and it looks as a guide rather than a training tool. The above table also shows that the overall scores for all modules were influenced by lowest scoring for IDSR (Windhoek, Dakar, Pretoria courses), Supervision (Niamey and Abuja courses) and Planning (Benin course) modules, underlining the importance of revision of these modules which was later undertaken by AFRO with the exception of the IDSR module..

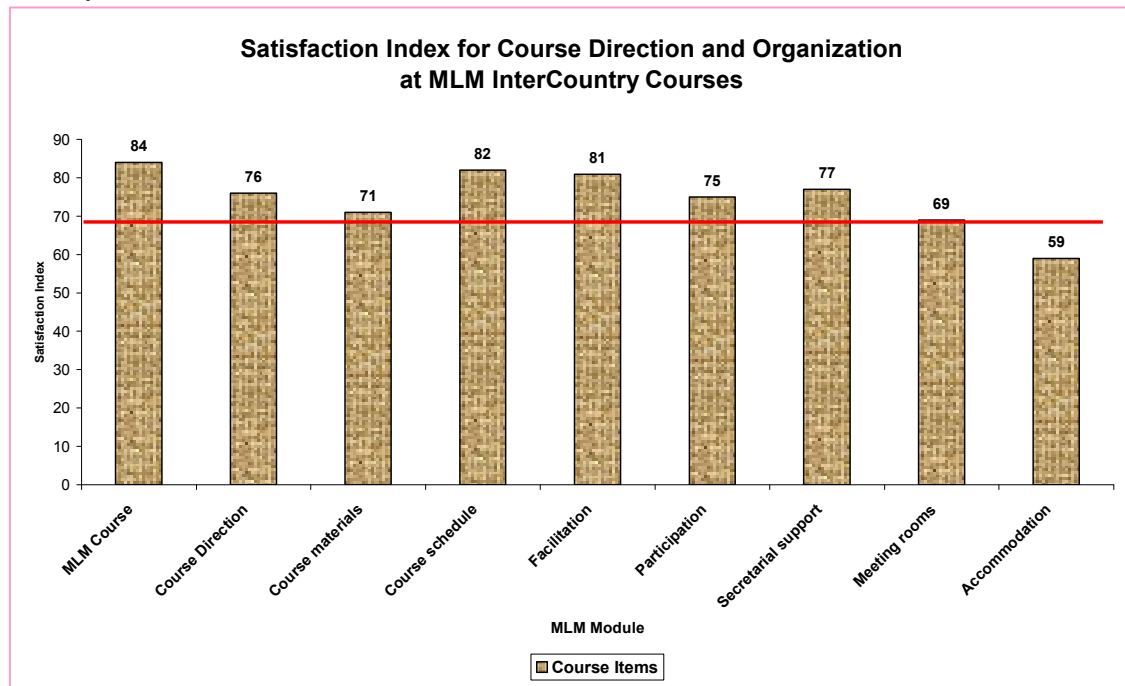
## **ii. EPI MLM Course direction and organization:**

The table10 below provides essential information about technical and administrative aspects of the 8 MLM courses organized by AFRO with the support of ICP teams.

<b>Course direction:</b>	was assessed high for all courses with a very high score (91%) for the Dakar course. The efforts by the AFRO and ICP staff in this regard are appreciated.
<b>Course materials:</b>	the scores exceed the threshold level of 70% but not in a significant manner. This is a reflection of undergoing revisions and subsequent improvements in the course materials which has been discussed above.
<b>Course schedule:</b>	the average score (71) hardly reached the threshold as many participants and also facilitators find the duration of the main course too short vs. number of modules to be covered
<b>Facilitation:</b>	was well appreciated by participants who generously gave high scores in all courses reviewed (76-92%). However, some of participants' comments indicate that not all facilitators systematically participated in the group work.
<b>Participation:</b>	the range of the scores is very large from 74% to 95% with maximum participation in Abuja and Dakar courses.
<b>Secretarial support:</b>	was poor in Niger and Benin workshops (69-70%) and varied in others with an average of 75%. It is important that experienced secretaries from ICP (or AFRO) who supported other MLM courses be included in the secretarial team
<b>Meeting rooms:</b>	for the Dakar and Pretoria courses the venue of the courses was inadequate, hence the lowest scores (63-68%) given by participants. AFRO should ask host countries and organizing committees to consider the venue a high priority in their course preparation programme.
<b>Accommodation:</b>	scored very low in Windhoek and Benin bringing down the overall score below the threshold level (69%).
<b>Meals:</b>	had the lowest scores in almost all courses (total score is 59 %).

In summary, the technical aspects of the courses were highly appreciated while the administrative arrangements raised serious concerns.

**Fig. 8: Satisfaction Index for course Direction and Organization at MLM Inter-country courses**



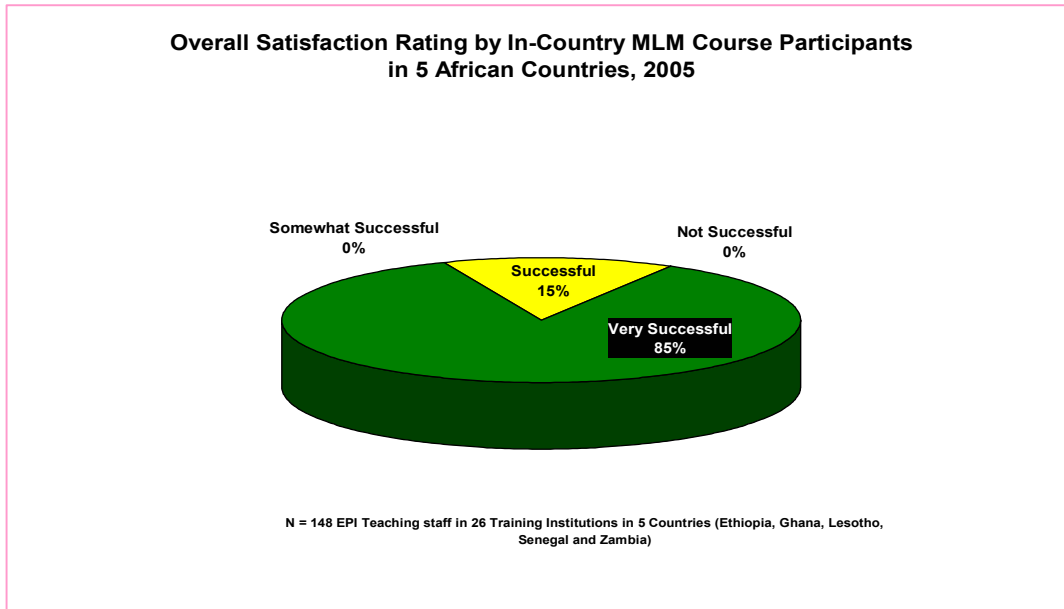
***Assessment of the EPI MLM courses by participants in countries visited***

A total of 151 past participants of in-country and inter-country of MLM courses were accessed for individual face-to-face interviews by the external evaluation team during country visits (one participant provided an electronic response). Most of the participants were service providers; others were from training institutions, WHO and UNICEF. An interview questionnaire (ET-3) was used to capture assessment results. (To some of the questions not all participants responded, thus their numbers slightly vary in tables below).

***i. Overall course satisfaction by Participants***

Participants were asked to indicate their overall satisfaction with the MLM course by responding whether the course was **“Very useful”, “Useful”, “Somewhat useful” or “Not useful”**. Of the 151 course participants interviewed, the following data show their overall assessment of the MLM course.

**Fig. 9: Overall Satisfaction Rating by In-country MLM Course Participants in 5 African Countries, 2005**

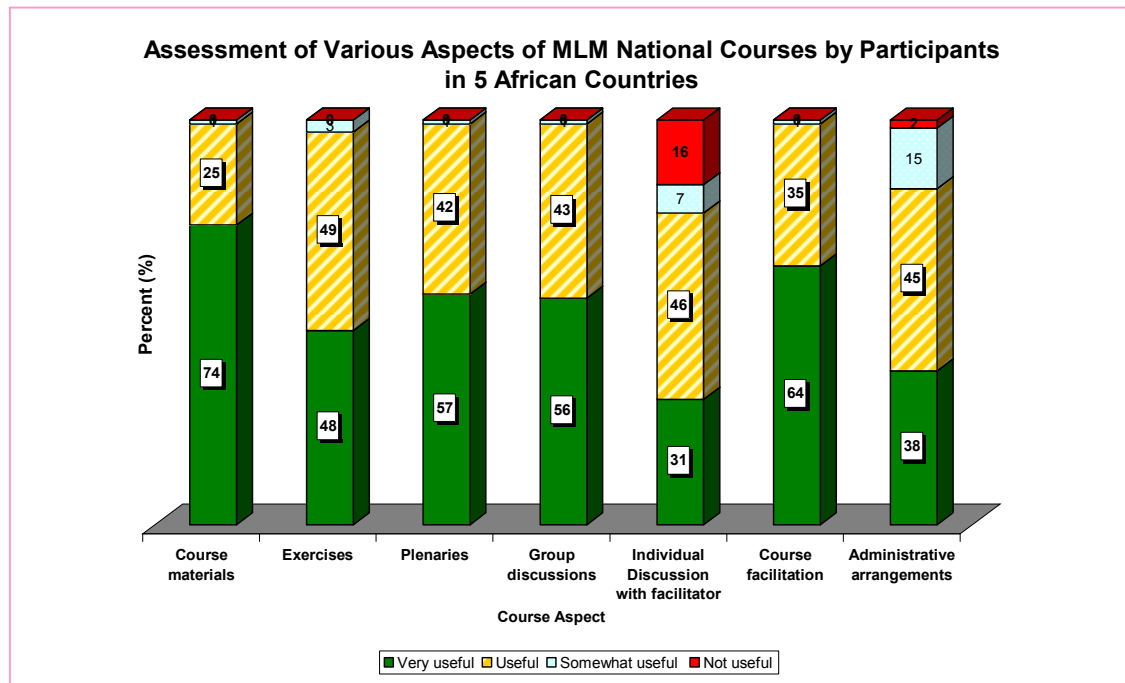


**Overall course assessment:** All participants found the EPI MLM course “*Very useful*” or “*Useful*”. In order to be sure of this exceptional level of satisfaction, the interviewers asked respondents to reconfirm their responses which revealed the same result.

*ii. Assessment of various components of the In-Country MLM course by participants*

Detailed assessment of the other aspects of the MLM course is shown in the following graph and the graph which indicate that all components of the course were assessed as “Very useful” or “Useful” by >70% of participants. The high proportion of “Not useful” responses to the question on individual discussions with facilitators is from Lesotho (10 out of 23 respondents) and Zambia (7 out of 30 respondents) where due to short period of the MLM courses most of the participants were not able to have these discussions.

**Fig. 10: Assessment of Various Aspects of MLM National Courses by Participants in countries Visited**



### iii. Focus group discussions with participants

The external evaluation teams held eight focus group discussions with participants from various MLM courses conducted in countries visited. The programme of the discussions included the relevance of the MLM course to their actual work, strong and weak points of the course, their personal experiences during and after the training, etc. Findings from the group discussions were summarized below.

Participants found the MLM course to be very relevant or relevant to their actual work due to the following reasons:

- MLM course updated them on new developments in EPI and helped them with their current job, filling the knowledge gap in EPI;
- MLM course enhanced their performance in management of data and improved data analysis in their day to day work;
- It offered a more comprehensive and systematic way of implementing EPI;
- It facilitated harmonization of theory taught in training schools with field practice.
- It helped them to train other health workers.
- Work of supervising became easier due to better understanding of various aspects of the programme;
- The course helped them to evaluate themselves: how much they knew about EPI.

- Modules on new vaccines, immunization safety, cold chain and vaccine management, communication and problem solving were most appreciated by FGD participants.

To the question on *strong or weak points* of the MLM course, participants made several comments:

<i>Strong points of MLM course</i>	<i>Weak points of MLM course</i>
<ul style="list-style-type: none"> <li>-Plenary sessions were very useful</li> <li>-Power point presentations were very clear and well organized</li> <li>-Facilitators were friendly, their experience, technical resourcefulness were good in national courses</li> <li>-Exercises and examples were relevant to our work</li> <li>-Modules were user-friendly. Some of the modules had very positive impact on our work</li> <li>-Modular approach gives more flexibility in training</li> <li>-Mixing tutors and DHMT staff facilitated exchange of useful field experiences and theoretical knowledge</li> <li>-The course provided them with new skills in problem solving.</li> </ul>	<ul style="list-style-type: none"> <li>-No site visits were organized for participants</li> <li>-Time was short for group discussions</li> <li>-Some exercises were not done due to time shortage</li> <li>-Arguments among participants during group discussion</li> <li>-CD-ROMs were not provided to participants of national courses</li> <li>-In some regional courses the complete set of MLM modules were not provided to each participant.</li> <li>-Different background of participants affected the group work</li> <li>-Course schedule was tight; there was no time for face-to-face- discussion with facilitators</li> <li>-Financial problems related to DSA: different per diem rates by different sponsors</li> </ul>

### ***3.11 Post-MLM Training Follow Up***

The follow up of trained managers or facilitators has not been consistent both at regional and country levels. Essential requirements for follow-up include:

1. Maintaining an inventory of all training materials produced by the Regional Office, ICPs and countries as well as inventory of all inter-country training courses with the following standard information:

- Overall course report with evaluation results;
- List of participants and facilitators; positions, sex and age distribution, etc
- Total cost of the training course and shared cost per partner
- Cost per course participant.

Similar database should be maintained by EPI units at country level.

2. Organize refreshers training of past participants which was recommended by participants themselves.

3. Including participants in the EPI Mailing List of participants to update them on programme development issues.

Tracking participants to determine their attrition and turnover rates

Evaluation of past participants' performance through observations and interviews with their supervisors.

### 3.12. MLM Training Costs

#### a. Cost of Inter-country MLM training

According to estimation by the AFRO EPI/CB unit, the financial resource needs for MLM training and related activities in 2004 were US\$1.85 million divided between the following budget lines:

Item	Budget (US\$)
❖ Development of materials and tools	100,000
❖ In - service training support	250,000
❖ Pre - service training support	400,000
❖ Supportive supervision	400,000
❖ Technical assistance/salaries	400,000
❖ Community empowerment	300,000
<b>Total</b>	<b>1,850,000</b>

During 2003 AFRO supported national MLM training courses with the following contributions (US\$):

According to 2004 VPD/AFRO workplan, US\$ 270 000 was provided to support national MLM training in 10 countries. In the same year AFRO conducted a course for Portuguese speaking countries in October 2004 in which it contributed US\$ 50 000. Another MLM course is currently under way to be held in August 2005 in Zambia with the support from AFRO and other partners.

The Table 27 below provides estimations for each MLM course and cost per participant. The cost per participant varies between US\$1550 and US\$ 3270 with an average of US\$ 1960 which includes all costs- travels, per diem, facilitation costs and local costs.

Country	MLM Funds (US\$)
Madagascar	30 000
Tanzania	30 000
Mali	30 000
Zambia	30 000
Senegal	25 000
Zimbabwe	39 000

**Table 9a.: EPI MLM Courses: cost estimations (US \$):**

MLM Course	Estimated Cost	No. of participants	Cost per participant	Source of support	AFRO contribution	Remarks
Abuja- 2001	150 000	74	2030	WHO USAID UNICEF	33 670	Information from other partners not available  -No. of participants does not include facilitators
DOUALA-2001	108 000	52	2080	WHO USAID UNICEF	N.A.	
Maputo- 2002	108 000	33	3270	WHO USAID UNICEF	N.A.	
Windhoek-2002	95 000	62	1530	WHO UNF UNICEF	39 100	
Dakar- 2002	113 880	61	1870	WHO UNICEF	59 400	AFRO estimated cost for two courses  US\$ 237000
Pretoria-2003	118 000	76	1550	WHO UNICEF USAID NESI	62 000	
Benin- 2003	118 000	85	1390	WHO UNICEF USAID UNF NESI	35 000	
Cape Town-2004	130 000	61	2130	WHO UNICEF NESI	15 000	-
Dakar- 2004	120 000	58	2070	WHO UNICEF NESI ARIVA	25 000	-

The high cost for the Maputo course is related to low number of participants as there were only 5 Portuguese speaking countries within the WHO African Region which sent participants to this course.

***b. Cost of In-country MLM training***

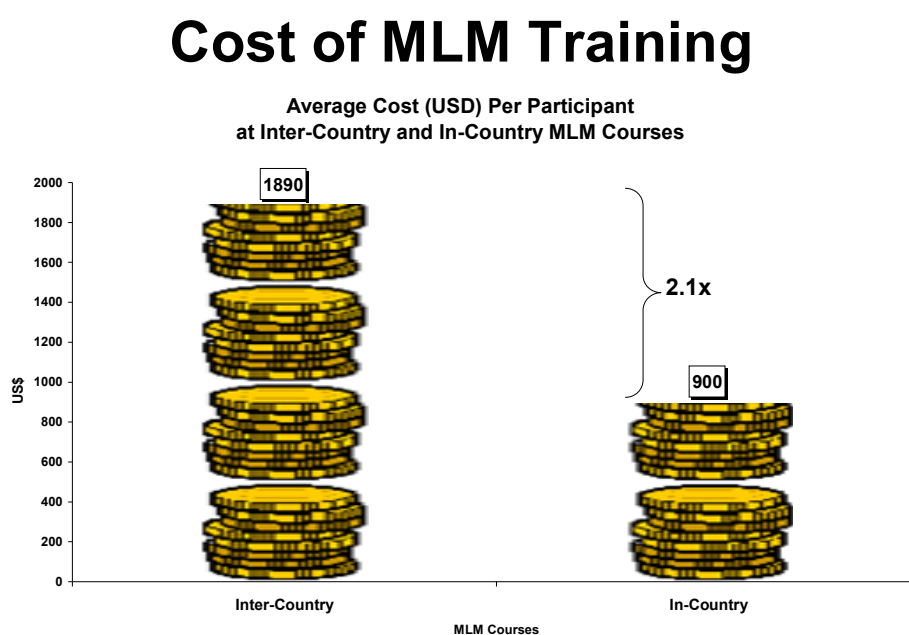
The external evaluation teams were not able to collect reliable information on the financial aspects including estimated costs or actual expenditure on all in-country MLM courses. Some fragmented information, however, was available in a few course reports which are summarized in Table 28.

**Table 9b: Cost estimations of in-country EPI MLM courses**

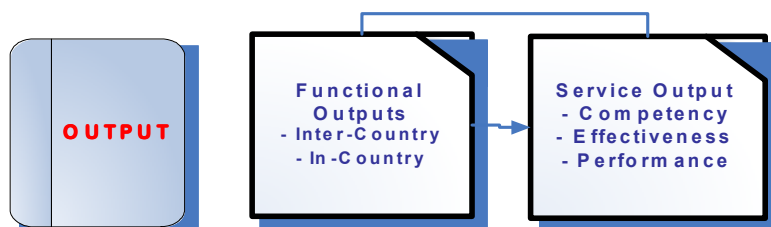
Country	National courses	No. of Participants	Actual expenditure (US\$)	Cost per participant
Ethiopia	Course 1	15	4900	327
	Course 2	30	9300	310
	Course 3	32	9900	309
	Course 4	35	10600	302
Ghana	Accra regional course	21	2130	101
Lesotho	Berea national course	38	5500	145
	Buta-Buthe step-down course	44	8514	194
Senegal	1st Session	25	18247	730
	2nd Session	32	11990	375
Zambia	Kabwe-2003	51	32450	636
	Lusaka-2004	56	23425	418

The actual expenditure on local MLM courses quoted in the above table refers to mainly per diem costs for participants. It does not include payments to facilitators, invited external experts, duplicating training materials, CD ROMs, and other local costs and facilities offered by the countries. AFRO estimates that inclusion of all these items will bring the overall cost per participant to about US\$900. Even with these additions, the comparison of the average cost per participant for inter-country and in-country MLM courses shows that the overall cost is lower for in-country participant (US\$ 900) than the same for inter-country participant (US\$ 1890).

**Fig. 11: Average Cost (US\$) per Participant at Inter-country and In-country Courses**



## 4. MLM Training Output



- Participants Profile, Attrition and Turnover
- Competency Assessment
- Performance and Effectiveness
- Facilitators' Pool & characteristics

### 4.1. Overview of MLM Training Outputs

#### a. Inter-country courses

Following the long interruption of management training in the African Region (1994 – 1999), a series of inter-country EPI MLM training courses started with the first course in 2000 in Niamey, Niger (with WHO global MLM modules) followed by other courses during 2001-2004 with modules developed by AFRO. The initial 2-3 courses were longer and were attended by more experienced national and WHO/UNICEF participants in order to obtain reach technical and experienced-based input to improve the content of the modules.

As from 2002, courses were consolidating the achievements of the previous training with projection to transform the inter-country training to country level. The objective of AFRO was to create a critical mass of trained national MLM facilitators who will carry forward MLM training in their respective countries.

The Table 11 provides details of inter-country courses conducted by AFRO during 2000-2003 reviewed during internal evaluation.

Table 10: Inter-country EPI MLM Course Details

MLMM Courses	Duration (days)	No. of countries	No. of facilitators	No. of participants	Facilitator/participant ratio
Niamey- 2000	5	8	14	32	1:2
Abuja- 2001	10	12	15	74	1:5
Douala- 2001	10	11	17	52	1:3
Maputo- 2002	9	5	9	33	1:4
Windhoek- 2002	9	17	11	62	1:6
Dakar- 2002	8	18	9	61	1:7
Pretoria- 2003	8	18	14	76	1:5
Benin- 2003	9	20	18	85	1:5
Cape Town- 2004	6	15	13	61	1:5
Dakar- 2004	12	19	11	58	1:5
Maputo- 2004	9	5	5	48	1:10
<b>Total</b>	<b>Range: 5-12</b>	<b>Range:5-20</b>	<b>XXXXXX</b>	<b>594</b>	<b>Most common ratio- 1:5</b>

Fig. 12a: Number of MLM participants trained at AFRO Inter-country Courses, 2000-2004

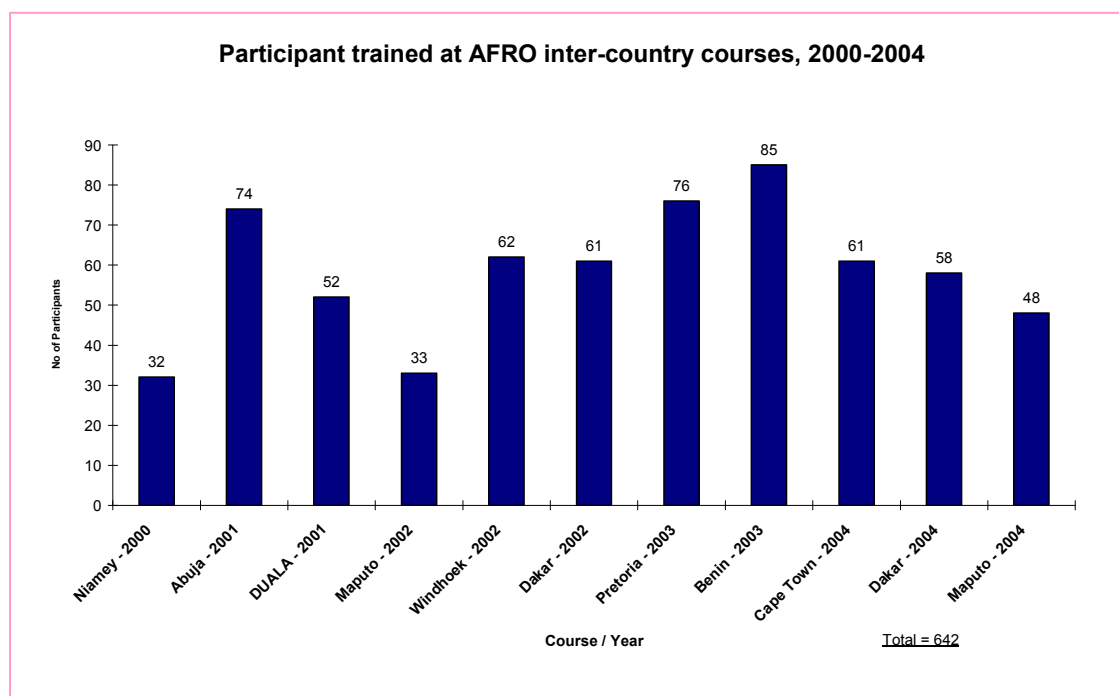
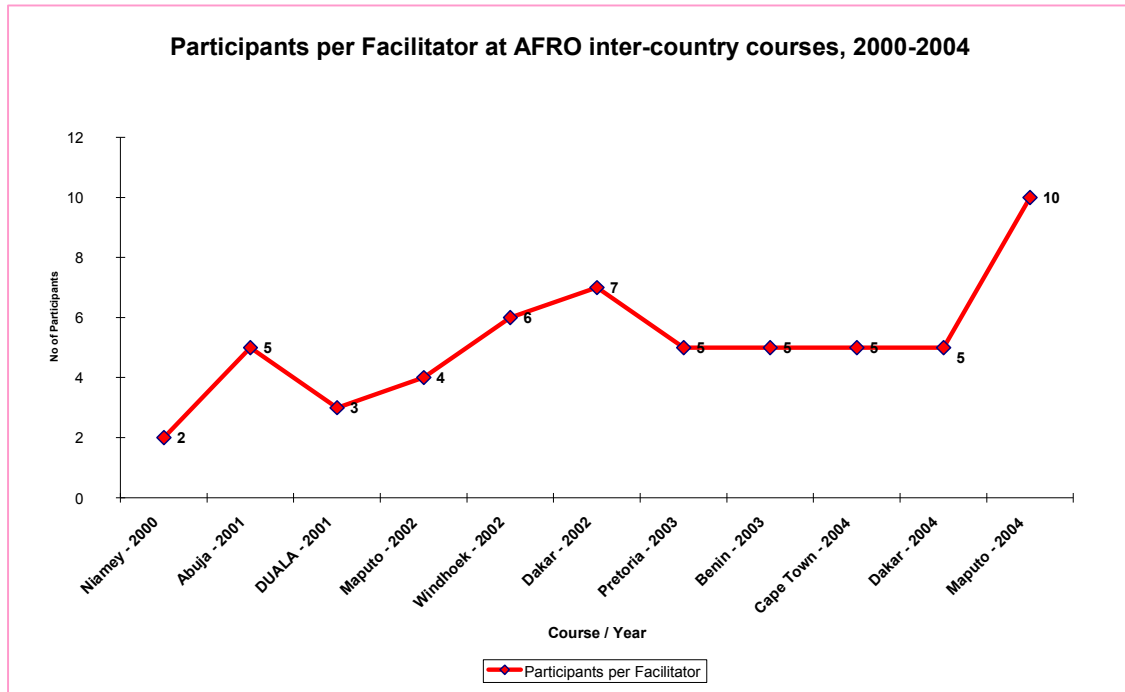


Fig 12b. Participants per facilitator at AFRO Inter-country courses, 2000-2004



Based on the Table 10 and Fig 12a,b the following observations can be made:

- ◇ The duration of these courses were initially longer except for Dakar-2004 course when AFRO decided to have a “classical” 2-week course. For example, for the Abuja and Douala courses the duration of the entire course was 15-16 days (TOT course- 6 days plus main course 9-10 days). This has provided more time for discussions and peer review of the modules.
- ◇ All countries in the African Region (46 altogether) have participated in the MLM courses. While invited countries usually have 1-6 participants in the course, the host country has an advantage to place 10-15 participants per workshop, thus creating a solid facilitators pool for national courses.
- ◇ Later courses included participants from other WHO regions (EMRO, SEARO), an indication of extra-regional influence of AFRO MLM course.
- ◇ In the 11 courses a huge number of participants were trained- 642. The most common facilitator/participant ratio was 1:5 which is within satisfactory range. Those courses with higher ratio (Windhoek-2002, Dakar-2002, Maputo-2004) a reduction of active participation in group discussion is observed. This is confirmed by comments of a number of participants in their final evaluation forms.

## b. National EPI MLM courses

In all countries visited during this evaluation, the training in immunization programme management at national and other levels were not held consistently before 2000. Since then the ministries of health use two strategies in training of health personnel in mid level management: sending participants to inter-country EPI MLM courses and training within the country using cascading strategy. Many health managers at various levels of the health system have attended national and regional/provincial EPI MLM training courses: 21 countries conducted in-country MLM course.

One of the constraints during this analysis was the absence of a reliable data from the sub-national levels. No database has been developed to consolidate ongoing training activities at various levels. The available data indicate that there was a slight reduction in MLM training during 2003-2004 in almost all five countries visited. This was explained by engagement of the programme in measles SIAs and polio NIDs in 2003-2004. The table below gives details on the number of courses and participants during the period 2001-2004, for which some information was provided to visiting evaluation teams.

**Table 11: EPI MLM courses in the countries visited**

Countries	Number of EPI MLM courses at various levels/number of participants trained					
	National MLM courses		Provincial/regional MLM courses		District EPI MLM courses	
	No. of courses	No. of participants				
Ethiopia	7	271	10	N.A.	N.A.	N.A.
Ghana	1	48	7	154	N.A.	N.A.
Lesotho	1	37			3	53
Senegal	1	44	N.A.	N.A.	N.A.	N.A.
Zambia	1	54	1	51	N.A.	N.A.

Note: Lesotho health system has no province level

## 4.2 MLM Trainees' Profile and Characteristics

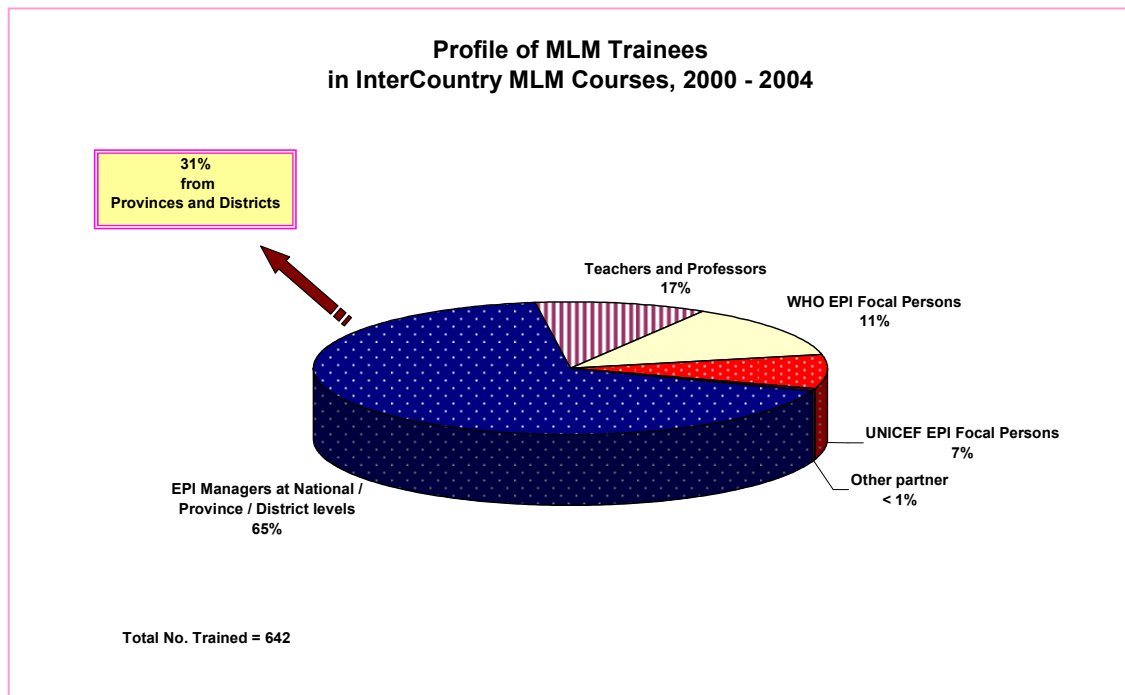
### 4.2.1. Characteristics of MLM Trainees

#### (a) Profile of Participants Trained at AFRO Inter-country MLM Courses

This analysis revealed extremely interesting results. Of 642 participants trained, 416 (65%) were health managers and 221 of these were EPI managers at central, provincial or district levels. Many teachers and professors (110 or 17% of total participants) benefited from the MLM training, 90% of them during the last four courses during 2003-2004. This is an investment towards pre- and in-service training. It is also in line with TNA and TFI recommendations which urged AFRO to increase their involvement in MLM training.

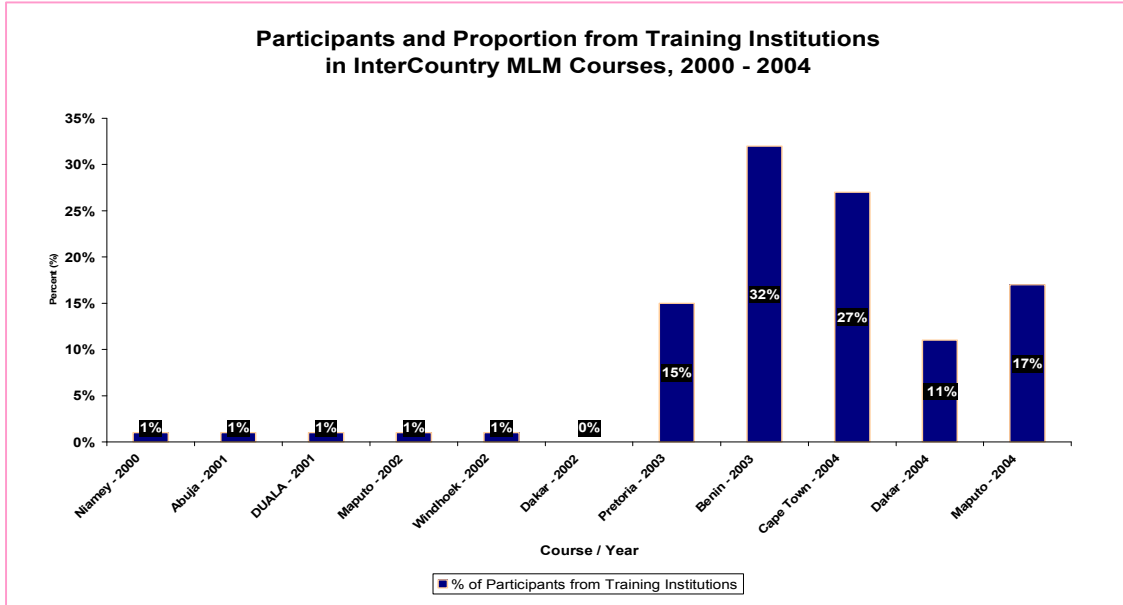
Fig 13 shows that 31of participants (199) were from sub-national level (provinces and districts). The proportion of country based WHO and UNICEF participants reaches 18% (114 participants of which about 60% were from WHO and 40% from UNICEF) indicating high commitment of these partners for immunization programmes. In the Windhoek course, the number of UNICEF country based officers trained exceeded the number from WHO staff.

**Fig.13: Profile of MLM Trainees in Inter-country MLM Courses, 2000-2004**



An “explosion” occurred in training of academic staff during the AFRO last five courses with 110 professors/teachers from training institutions trained. Each of these courses had an average 22 teachers who going back after training introduced changes in EPI teaching based on new developments in the programme (Fig. 14)..

Fig. 14: Trends in Training of Teachers at Inter-country EPI MLM Courses



**b) Profile of Participants in Visited Countries Trained at Inter-country MLM Courses**

Information on the number of participants trained in visited countries at national (627) and inter-country MLM courses (79) indicates three types of target groups (Table 12):

- 1) Staff involved in the EPI service provision (EPI managers and other managerial staff involved in the immunization programme at various levels);
- 2) Staff from the health training institutions (tutors, teachers);
- 3) EPI partners.

As can be seen from the table above, the majority of the participants (49%) in the inter-country MLM courses were in the service provider group.

Participants from training institutions and partner organizations constitute 24% and 27% respectively. Senegal, as a host country, benefited most from AFRO courses (34 participants-43%, of 79 trained).

**(c) Profile of Participants in Visited Countries Trained at In-country MLM Courses**

The results obtained from the in-country national, regional and district MLM course participant lists (627 participants), showed a different trend (see Fig 15): the majority of participants at in-country courses were service providers: 73% (compared with 49% trained by AFRO); and only a small fraction of participants were from partner group: 4% (compared with 27% trained by AFRO). The tutor group has equally benefited from inter-country and in-country courses (24% and 23% respectively) especially in Ethiopia, Senegal and Zambia.

The service provider group includes Public Health Nurses, Community Health Nurses, DHMT officials, EPI focal persons, etc. The latter, which constitutes almost half of the service provider group, includes EPI managers or EPI focal persons, Disease Control/Surveillance Officers, and Logistics/Cold Chain Officers at national, regional and district levels.

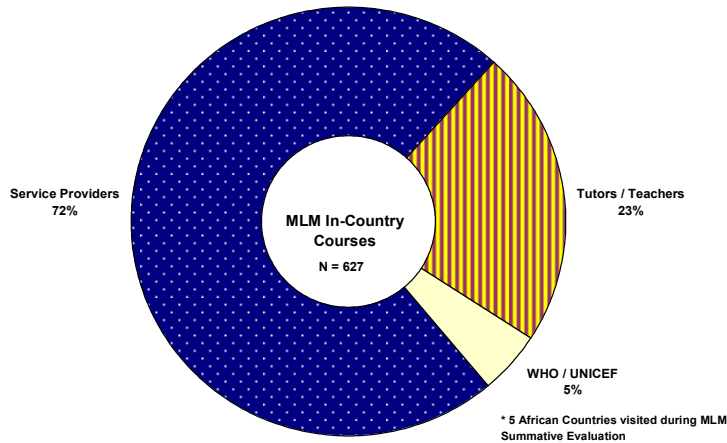
**Table 12: Participants from visited countries trained at AFRO inter-country EPI MLM courses**

Countries visited	No trained	EPI Managers / Service Providers	Tutors	Partners (WHO, UNICEF, others)
<b>Ethiopia</b>	11	6	2	3
<b>Ghana</b>	11	6	2	3
<b>Lesotho</b>	6	3	1	2
<b>Senegal</b>	34	17	7	10
<b>Zambia</b>	17	7	7	3
<b>Total:</b>	<b>79</b>	<b>39 (49%)</b>	<b>19 (24%)</b>	<b>21 (27%)</b>

Fig. 15: Participants Trained at In-country MLM Courses

## MLM Participants at In-Country Courses

Participants Trained at In-Country MLM Courses\*



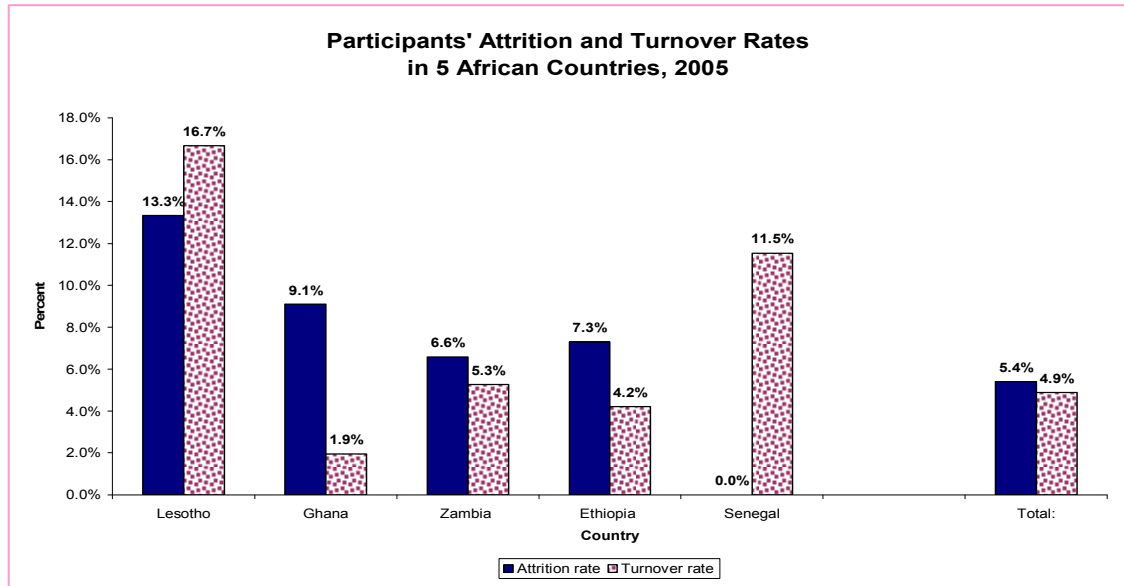
### 4.2.2 Participants' attrition and turnover rates

The information on attrition and turnover rates were obtained through face to face interviews with participants, supervisors, co-workers during sites visits as well as using telephone, e-mail or radio communication. In this report, **Attrition** is interpreted as the number of health workers, teachers and partners who were trained in EPI but left MOH or Health Sector or retired/deceased; **Turnover** is the number of participants who left EPI but still were working within health sector.

The evaluation team collected information from 573 participants as regards their location, current position and position prior to MLM training. Details of these analyses are shown below.

In general, the health manpower pool in African countries is perceived to be characterized by a high attrition and turnover rates. The high attrition at the health facilities prevents accumulation of experience by health personnel in a specific programme area including EPI.

**Fig. 16: Participants' Attrition and Turnover Rates in Countries Visited**



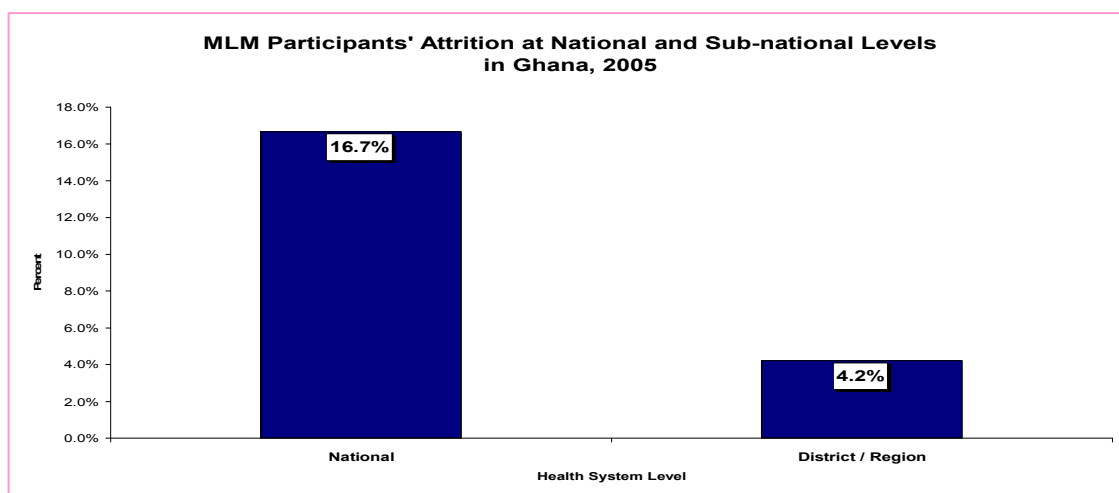
A bias related to the interpretation of data on attrition and turnover rates is that the duration between the dates of MLM course and the review could affect the response. For example, most of the participants in Ethiopia were trained in 2003-2004 MLM courses and therefore the summative “attrition and turnover” rate of 11.5% was considered too low against the national estimate of 40-41%.

Of the total of 573 participants, 31 left the country or the health sector, retired or deceased yielding an attrition rate of 5.4%. Another 28 persons left EPI but were still working in the health sector, a turnover rate of about 5% indicating rather low attrition and turnover rates contrary to beliefs of high turnover of health staff in the African countries. However the evaluation team interprets these data with caution based on the following observations:

These rates vary country to country depending on many factors including socio-economic factors, conditions of service etc. Contrary to the low rates indicated above, in some countries the rates may be too high, for example, in Lesotho attrition and turnover combine rate is almost 30%! The rates also depend on the period between training and the assessment of the rates: longer the period, the higher is the rate.

The rates may also relate to the administrative level of the health system where the MLM participants worked. As illustrated below by the example of Ghana, attrition and turnover rates were higher among health workers at national (central) level compared with district level: attrition and turnover rates among managerial level staff at national level were >18.7% for both inter-country and in-country participants while district level staff attrition rate was 4.2, with a turnover rate of 2.1%.

**Fig. 17: MLM Participants' Attrition at National and Sub-national Levels in Ghana**



**Table 13: Attrition and turnover rates in Ghana in relation to EPI**

Course participants	No. of participants trained	No. of participants at post	Total no. of participants who left EPI or MOH	Attrition Rate (%)	Turnover Rate (%)
Inter-country	11	9	2 (18.2%)	2 (18.2%)	0
National	48	39	9 (18.7%)	8 (16.7%)	1 (2.1%)
District/Region	95	89	6 (6.3%)	4 (4.2%)	2 (2.1%)
<b>TOTAL:</b>	<b>154</b>	<b>137</b>	<b>17 (11.0%)</b>	<b>14 (9.1%)</b>	<b>3 (1.9%)</b>

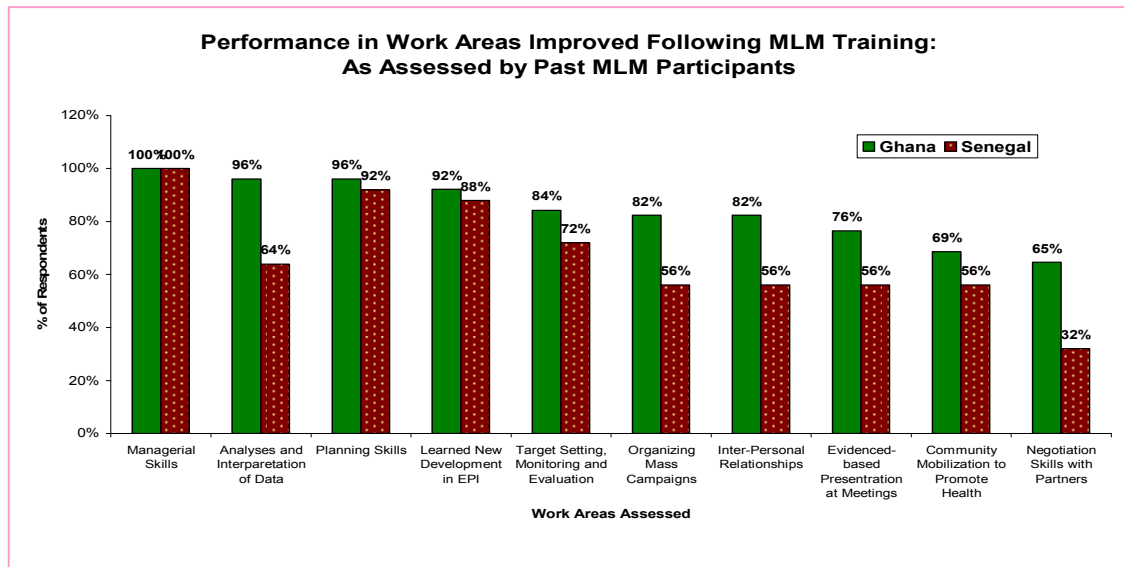
### ***4.3 Trainees' Competency, Effectiveness and Performance***

In order to determine the competency, effectiveness and performance, the evaluation team administered self assessment questionnaires to the MLM participants and conducted interviews with their supervisors.

#### **4.3.1. Self Assessment of Performance by MLM Participants**

The analyses of self assessment by participants, summarized in Fig 18, show that the MLM course influenced improvements in the participants' managerial and planning skills, target setting abilities, monitoring and evaluation skills as well as updated them on new developments in EPI. Many professors/teachers in Ethiopia, Senegal and Zambia indicated during the interviews that after MLM training they have introduced changes in their teaching both in the content and methodology, they have acquired in MLM courses.

**Fig.18: Improvement of Performance in Work Areas Following MLM Training**



**Table 14: Career advancement of participants after MLM training**

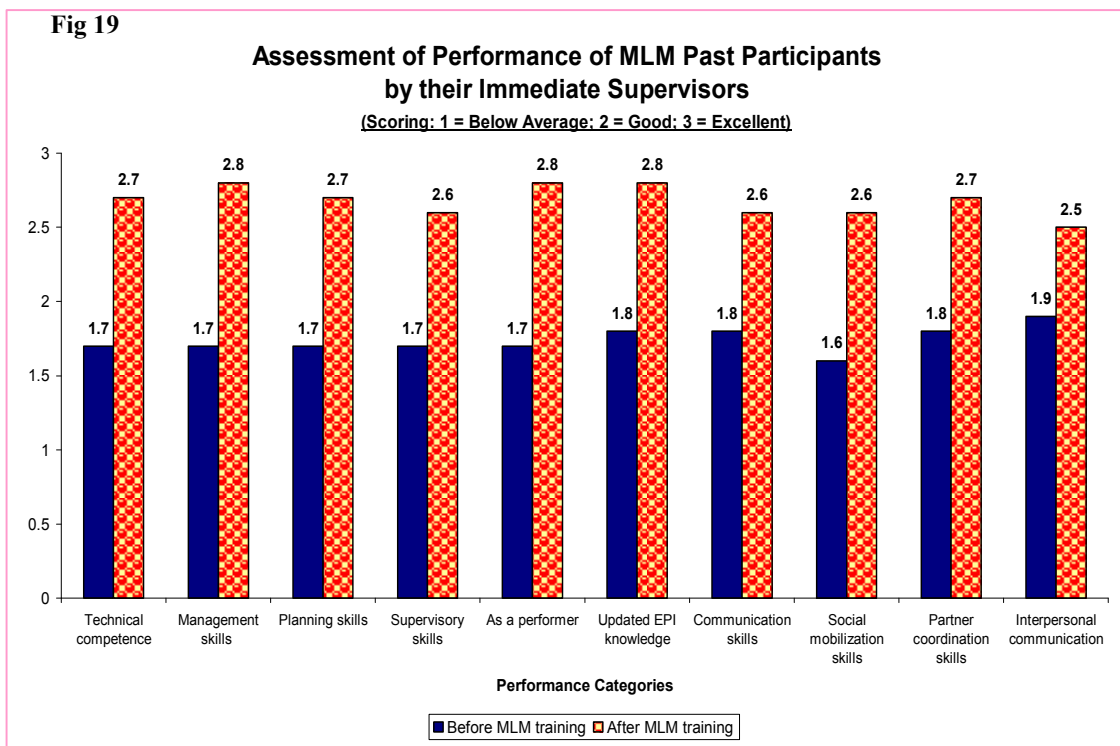
The table 14 shows that about 25% of participants were promoted in post or advanced in their Career after the MLM training. Although promotions in some countries were related to the years of service, participation in and skills development from courses like the MLM training were taken into consideration when competing candidates apply for higher posts.

Countries visited	Number interviewed	Having same position after MLM training	Advanced in Career after MLM training	Percent (%)
Ethiopia	22	12	10	45.5 %
Ghana	51	37	14	27.5 %
Lesotho	23	17	6	26.0 %
Senegal	26	23	3	11.6 %
Zambia	30	55	5	17.0 %
<b>Total:</b>	<b>152</b>	<b>114</b>	<b>38</b>	<b>25.0 %</b>

#### 4.3.2. Assessment of Trainees by Supervisors

To obtain supervisors' views on participants' performance prior and after MLM training, interviews were arranged with supervisors of 42 past participants. Despite the low number of participants whose supervisors were interviewed, this was an important source of information with outcomes to be used as a supplement for performance evaluation.

The target group for this interview included immediate supervisors of past participants, working with them in most cases 1-3 years. Questions were addressed to supervisors on various performance categories, asking them to score answers using “3”-for very good or excellent performance, “2”- for good or satisfactory performance and “1”- for below average performance. The results of this interview were expressed as a value of the mean score per responses prior and after participant’s MLM training, as shown in the following graph.



\*Note: These were mean values adjusted to the number of responses in five countries

The figure above shows that the MLM training, according to perceptions of supervisors, has contributed to significant improvements in the performance of the MLM participants. The most profound changes were in the area of technical competence (updated knowledge on EPI), management, planning, social mobilization, partner coordination, etc. There was also perceived benefit of the training for supervisors themselves, as they now could share some important responsibilities and workload with the newly trained staff, such as supervision on immunization safety, use of new EPI technologies, planning and data analysis and evaluation, etc.

## 4.4 Facilitators’ Profile

### a. Inter-country courses

The analysis of course facilitation patterns at inter-country courses show that the African Region reached self-sufficiency to run their MLM courses. WHO/AFRO and WHO inter-country (ICP) teams facilitated in all the 11 courses, with each providing an average of 4

facilitators per course. WHO country based EPI focal points, WHO consultants recruited from the African region also extensively supported MLM teaching acting mainly as co-facilitators (7 out of 11 courses). There is a good contribution as well from the UNICEF Regional Offices, WHO Headquarters, NESI, GAVI and CVP/PATH providing immunization experts with high managerial expertise.

**Table 15: Facilitators' pool**

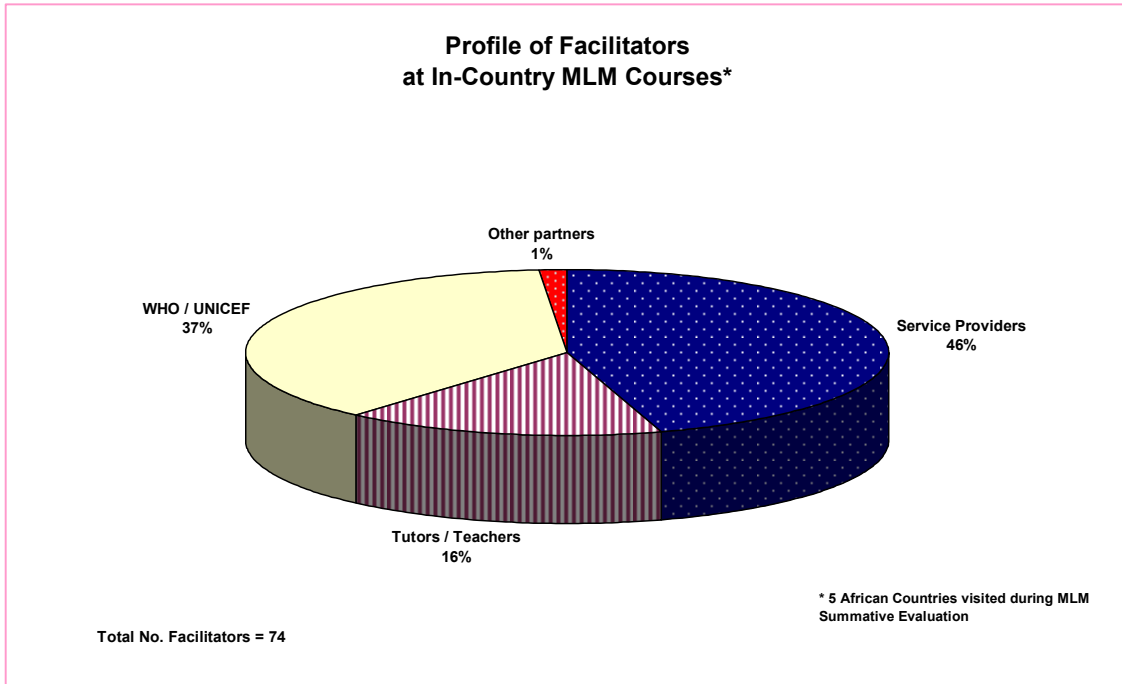
MLM Course	No. of facilitators	WHO/AFRO	WHO/ICP	WHO/Country	WHO/HQ	UNICEF/RO	STC	NESI	GAVI SVP/PATH
Niamey- 2000	14	3	4	6	-	-	1	-	-
Abuja- 2001	15	6	2	3	1	-	-	2	1-GAVI
Douala- 2001	17	2	6	7	1	1	-	-	-
Maputo- 2002	9	3	1	5	-	-	-	-	-
Windhoek- 2002	11	3	3	1	1	1	-	-	2-CVP
Dakar- 2002	9	2	5	-	-	1	1	-	-
Pretoria- 2003	14	5	3	1	1	-	1	2	1-GAVI
Benin- 2003	18	5	6	4	-	-	1	2	-
Cape Town- 2004	13	5	3	-	1	1	1	1	1
Dakar- 2004	11	7	1	-	-	-	-	2	1
Maputo- 2004	5	3	2	-	-	-	-	-	-
Frequency of facilitation over 10 courses	NA	11/11	11/11	7/11	5/11	4/11	5/11	5/11	5/11

AFRO experience in having co-facilitators in MLM training among national participants has two positive implications: firstly, they support ongoing course; secondly, on their return these facilitators can organize national MLM courses using the experience in facilitation gained in the inter-country course.

***b. In- country courses***

One of the main goals of AFRO was to create a critical mass of facilitators at country level to ensure the continuum of management training in immunization. Thus many of participants who attended inter-country courses entered into the national facilitators' pool. However some countries visited (Ethiopia, Ghana and Zambia) indicated their need for more facilitators in view of their high demand in MLM training at sub-national level.

Fig 20



The figure above shows that facilitators were from various institutions and organizations, which were arranged in three groups in the pie diagram:

- Ministry of Health- this is a large group and includes national and regional EPI managers, Senior Medical Officers, Principal Nursing Officers, Disease Control Officers, National Surveillance Officers, National Cold Chain Officers etc.
- Tutors- the number of facilitators from the training institutions is growing but is still small (especially in Ethiopia and Lesotho where more than half of the facilitators were from partners). There is a need therefore to seek for more placements of senior staff and lecturers at AFRO organized inter-country courses or in the future national courses.
- Partners- this group includes mainly WHO and UNICEF officers. Some of them were international staff, others were national programme officers.

### ***FACILITATORS ASSESSMENT OF MLM COURSES: RESULTS OF FOCUS GROUP DISCUSSIONS***

To have a collective view of facilitators on EPI MLM course content and organization, several focus group discussions were held during the external evaluation. Some of the participants were trained at AFRO-organized EPI MLM courses, others- in national MLM courses. The focus groups included training institute instructors, EPI Unit staff (including National EPI Managers), MOH staff

***What MLM Course Facilitators said...***  
(Excerpts from FGDs with facilitators)

***Overall, the MLM course was:***

- Very relevant for us;
- Had positive impact on our performance
- Opened a window for us to use computers, CDs, Internet and enter in EPI network
- MLM facilitation helped us to facilitate other trainings (IMCI, RBM, IDSR)
- MLM improved the quality of teaching in our training institutions

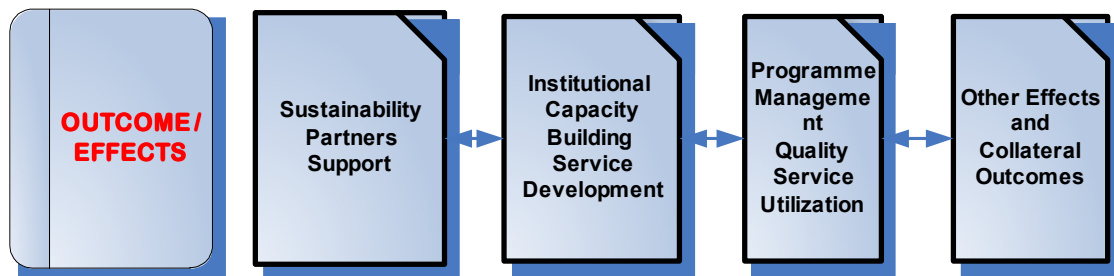
and representatives from partner organizations (WHO, UNICEF).

The overall impression was that the MLM course attended was “*very relevant*”. Their confidence as managers was increased and the skills they learned have had a positive impact on their performance and that of the EPI programme in general. The course and materials also assisted with their planning, organizing measles and polio campaigns as well as designing RED strategies.

The discussions on the various aspects of the course are summarized as follows:

- ***Period of the course***: the general opinion was that a one week period for regional MLM courses is sufficient, as longer than that will keep them away from their jobs and monitoring of other programmes and activities.
- ***Mix of pedagogical methods*** is good. The most useful methods noted were plenary and group discussion, as these give opportunities to share experiences among participants.
- ***Measuring progress of learning new knowledge and skills by participants*** was conducted by facilitators using various pedagogical methods.
- ***Follow-up and updating*** of the members of the facilitation pool on programme developments was raised during all the FGDs as a need. The groups noted that this aspect merits attention, as no refresher courses were offered to them. For those who participated in the Abuja MLM courses (2001), it was felt that updates would be useful, as they had been trained in the older modules. In addition, a new crop of staff has come through the system, requiring additional training.
- ***The AFRO MLM CD-ROM*** was viewed as very useful and will facilitate adaptation at country level. As a recommendation to improve the courses, the groups suggested that more audio-visual and didactic materials should be provided to improve teaching. Another suggestion was that the national core facilitators should meet regularly to be updated on programme news.

## 5. MLM Training: Outcome and Impact



- Institutional Capacity Building and EPI Programme management Competency / Quality of Service
- Sustainability and partner support
- Effects and other Collateral Outcomes

### ***5.1. Institutional Capacity Building and EPI Programme Management Competency / Quality of Service***

The MLM training is a short but a labour-intensive course providing immunization managers and tutors with new, advanced skills in planning, management, training, monitoring and evaluation. As was evidenced during face-to-face interviews by trainees themselves and their supervisors, these skills helped them to better supervise and support immunization operations such as service delivery, cold chain and logistics, purchase and quality control of vaccines etc.

With a few exception, in all countries visited most of the trainees after attending the MLM course, acted as facilitators for the cascaded courses at national or sub-national levels. The other outcome of the MLM courses is related to the recent approach of increased participation of tutors in this training. The training equipped them with a new knowledge and training materials to improve their teaching in immunization even before curriculum is updated in their institutions. Many of them share these materials and their new knowledge with their colleagues. An example from Ghana review, summarized in Table 16, illustrates the role of MLM and other trainings, among other interventions, in improving the quantitative and qualitative indicators related to EPI.

**Table 16: Improvements of other quality indicators of immunization services in Ghana**

National DPT1/DPT3 dropout rates	8% - 2002; 7% - 2003; 8% - 2004
Reporting completeness-	100% - 2004
Reporting timeliness	80% - 2004
Reporting accuracy-	“Good” as per DQA report for 2003
National vaccine wastage rate:	3% for Pentavalent vaccine in 2003
Reports on AEFI during 2003-2004	0
Construction of incinerators	in 110 out of 138 districts
% districts covered by RED strategy	100% by may 2005

These remarkable achievements were results of massive training along with targeted immunization campaigns (NIDs and SIAs), intensified surveillance activities within IDSR, generous financial back up by partners, new vaccine introduction, etc.

## ***5.2. Other Effects, Collateral Benefits and Impact of MLM Training***

Among the recommended actions by the African Regional EPI Strategic Plan 2001-2005, systematic evaluation is proposed to assess *progress made in training and its impact on the reduction of morbidity and mortality* of vaccine preventable diseases.

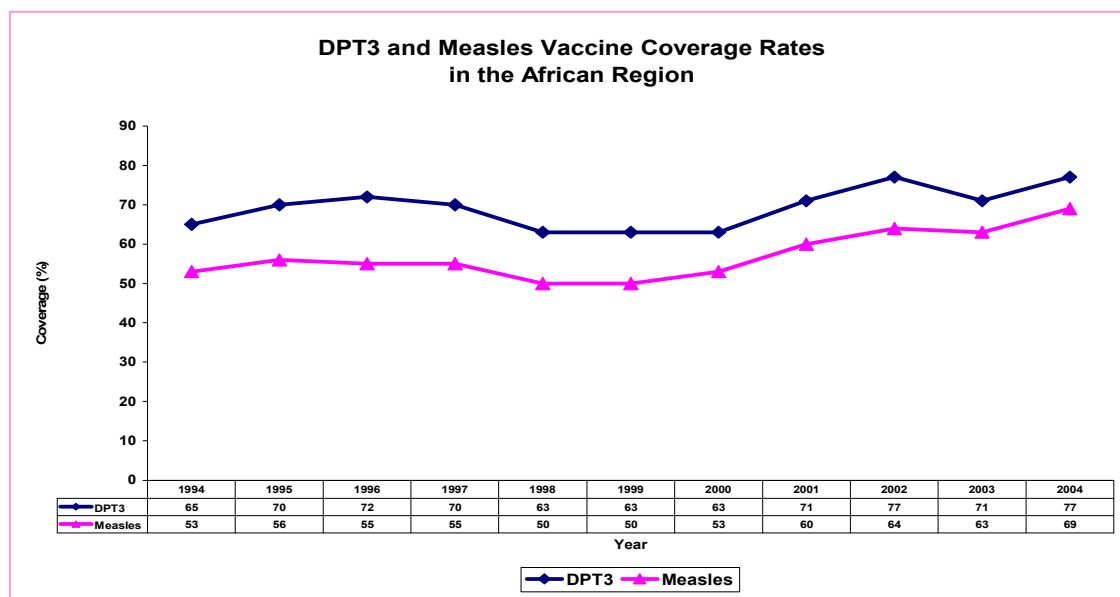
However it is recognized that training accountability and impact is difficult to measure (indicators of training quality are ad hoc) despite the extent of resources devoted to training. Training monitoring and evaluation have neither baseline nor a set of measurable indicators against which to have precise assessment of the success. Even universally used indicators such as the number of courses or trained participants were unable to characterize a successful training programme. During the external evaluation, for example, the evaluators reported a number of cases when trained participant could not make much difference in his or her work area (cascading training, influencing curriculum change, etc.) or share acquired new knowledge and training materials with colleagues.

Some of the indirect indicators proposed below, however, may provide additional information on long-term benefits of training in management:

- ◇ frequency of occurrence of target disease **outbreaks** in catchment areas where staff were trained compared with other areas with low training activity;
- ◇ **AEFI** incidence in catchment areas where staff were trained;
- ◇ target **diseases incidence** in catchment areas where staff were trained compared with other areas with low training activity
- ◇ **Immunization coverage** in catchment areas where staff were trained

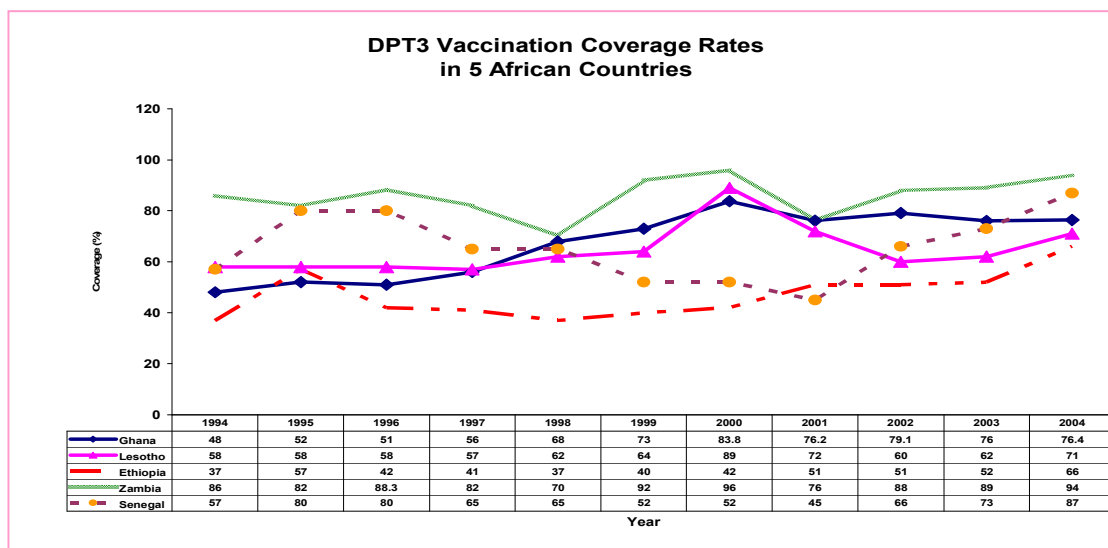
To test the last indicator, the trend in immunization coverage (using DPT-3 as an indicator) in the African Region and in countries visited for external evaluation for two distinct periods were reviewed: training stagnation period- 1996-99 and training activity period-2000-04, with the results shown in figures indicating positive changes in the regional and national DPT3 coverage during 2000-2004.

Fig 21



The above data indicate sustained higher DPT3 and measles coverage in the African Region during recent years, which is notable after 2000 when MLM training activities were intensified. Similar improvements in DPT 3 coverage rates during training activity period 2000-2005 have been observed in five countries visited by the evaluation teams (Fig 22).

Fig. 22 DPT3 Coverage trends in Countries Visited



As indicated above, improvements in immunization programme indicators including vaccination coverage cannot be contributed solely to training. However, through perception of users and country based partners, satisfaction index results and observations in the field during the external evaluation, one can conclude that the MLM training has increased the performance of the trained staff and therefore contributed to the improvement of EPI coverage in the African region.

Other (collateral) benefits of the MLM course include:

- Development of the **capacity building plans** for participating countries and discussions on how to follow up and monitor implementation of the plan
- Development by the host country of a solid **pool of trained facilitators** for the future national EPI or other MLM courses (IMCI, management of malaria, IDSR);
- **Extra-Regional participation** from WHO other Regions (EMRO, SEARO), WHO, UNICEF, NESI, BASICS, GAVI headquarters offers exchange of other experiences for the benefit of all participants.
- There is a consensus among WHO and partners to use AFRO MLM modules for training of mid-level managers in other Regions. This **extra-regional influence** will be further boosted by publication of a comprehensive handout “Enhanced Immunization programme implementation” which is under preparation by AFRO and NESI based on AFRO MLM modules”

### ***5.3. MLM Training Sustainability – National Commitment and Partner Support***

The immunization programmes in the Region continue to rely on government support and supplementary contribution by external sources. From the handful supporters of EPI in 80s, the programme currently enjoys wide range of collaboration. Due to increased partnerships and regional programme co-ordination, resource mobilization has been significantly improved which also had implications on the training component of EPI. National governments also contribute substantial money and non-monetary resources for the implementation of immunization activities including training. This trend has taken a new impetus after introducing Sustainable Financing Plan (SFP) concept.

The involvement of various monitoring mechanisms regionally and countrywide (TFI, ARICC, national ICC etc.) promoted unprecedented levels of transparency and accountability in the deployment and utilization of resources in the Region. This has resulted in increases in extra-budgetary resources for training supported by partners. For example, tremendous commitment has been made by GAVI partners towards supporting immunization programmes in the African Region with an emphasis on strengthening routine immunization, including training.

The EPI training, especially MLM courses were supported by UNICEF, USAID, NESI, UNF, CVP/PATH, BASICS, AMP, ARIVA, GAVI, among others. At country level, partnerships evolve within the national ICCs, while at regional level the partnerships for immunization took the form of Task Force on Immunization (TFI) and, since 1993, the African Inter-agency Co-ordination Committee (ARICC). During each annual meeting, the

TFI and ARICC discuss progress and make recommendations to improve national and inter-country training as well as capacity building in general.

An immediate result of stronger partnerships was an increase in the level of funding for MLM training activities especially by USAID, UNF and NESI. Partners contributed not only financially but also participated in proof reading, in technical review of the module content as well as personally participated or facilitated training activities (UNICEF, CVP/PATH, NESI, GAVI, BASICS, etc.).

The following were partners in countries visited which specifically support training in EPI including EPI MLM training:

Countries visited	Partners supporting EPI training
Ethiopia	WHO, UNICEF, USAID, DANIDA
Ghana	WHO, UNICEF, USAID, GAVI, UNF, GlaxoSmithKlein (SK)
Lesotho	WHO, UNICEF, Development Cooperation of Ireland, GAVI, JICA
Senegal	WHO, UNICEF, NESI, WB, ADB, CVP/PATH, Luxembourg Cooperation
Zambia	WHO, UNICEF, NESI, USAID, DANIDA

**WHO** is one of the major partners in EPI, providing technical, financial and material support to MLM training through AFRO, ICP Epidemiological Blocks and its country offices. The support includes provision of teaching materials and guidelines, course facilitation, financial support to local costs of the courses, participants' participation costs, provision of consultants and experts, etc.

**UNICEF** is another major partner which supports MLM training. This support includes financing national participation in inter-country and national MLM courses, facilitation of courses, production of training materials including CD-ROM production and others.

**GAVI** supports strengthening of routine EPI, which includes training for capacity building at all levels.

**UNF** is supporting EPI MLM training in the African Region through funding for participants to attend inter-country courses, production, translation and testing of training materials, participating in training, etc.

**USAID** financed a project "Strengthening of routine immunization" through WHO (1999-2003), which had a major component in EPI MLM training. The agency's support also includes production of training materials for MLM training, organization of MLM courses.

**NESI** (Network for Education and Support in Immunization) provides financial and technical support directly or through WHO/AFRO to improve pre- and in-service training, national participation in MLM courses. It provides significant contribution to TNAs and development of standard curriculum for training institutions.

**AMP** provides financial and technical support to countries of the African Region in training of national staff in immunization, organizing management training in 5 countries of the Region, improving MLM course materials.

**CVP/PATH** participates in MLM course facilitation, supports the review and testing of MLM modules.

**GTN** (Global Training Network) supports vaccine quality training for national staff of NRAs and vaccine producers, conducts AEFI surveillance and vaccine management courses for EPI and cold chain managers, etc.

**The Evaluation Team congratulates partners involved in MLM training for their generous support and collaboration. The Team further encourages them to continue their contribution to the management training which is critical for reaching the Millennium Development Goals.**

# Part IV – Lessons learnt and Recommendations

## 6. Strengths, Weaknesses, Opportunities and Threats to MLM Training

The chapter outlines the strengths, weaknesses, opportunities and threats to MLM training in the African region.

### a. Strengths of MLM training

At Regional level	At country level
<ul style="list-style-type: none"> <li>➤ MLM training programme is based on RC Resolutions of WHO/AFRO, Regional 2001-2005 Immunization Strategic Plan, TFI recommendations, TNAs and national programme reviews. Its “legitimacy” is very high having strong backup at policy level.</li> <li>➤ The programme has a tremendous support and involvement by partners who consider MLM training as a joint venture. Current evaluation exercise was a good example of this having evaluators from WHO, UNICEF, UNF, USAID, NESI.</li> <li>➤ Programme has effective leadership at AFRO, WHO/ICP levels to promote, plan and implement MLM training which is seen as a major component of capacity building. This has enabled AFRO to move from ad hoc training to planned training by MLM courses fairly distributed in time, by WHO official languages in the Region and by WHO/ICP blocks.</li> <li>➤ There is a set of well elaborated, structured and learner-friendly modules which have undergone a series of testing, validation by experts and MLM course participants. They were well adapted and were unique for African region. All modules were scored very high during the external evaluation by course participants/facilitators.</li> <li>➤ Faculty of MLM courses comprising AFRO, WHO/ICP, UNICEF etc., is technically strong, experienced and able self-sufficiently run the MLM course with active, adult learning methodology and problem-solving approach. This was confirmed by 8 focus group discussions and individual interviews with participants/facilitators.</li> <li>➤ MLM training after 2002 involves teachers and professors from pre- and in-service institutions who after training start teaching in a new way even before curriculum review is conducted (which usually requires more time).</li> </ul>	<ul style="list-style-type: none"> <li>◇ MLM training is well recognized and supported by policy level.</li> <li>◇ Countries reviewed expanded the MLM training through cascading it to province/region and district levels.</li> <li>◇ Country based partners consider MLM training as a “Good value for money”.</li> <li>◇ Some countries adapted AFRO MLM modules to suit their country situation.</li> <li>◇ Each country visited had a pool of facilitators to run a self-sufficient MLM course.</li> <li>◇ During AFRO MLM training, CB plans were developed by countries. Some of them have already been funded by AFRO and partners.</li> </ul>

## b. Weaknesses

At Regional level	At country level
<ul style="list-style-type: none"> <li>➤ Despite high concern and practical steps towards programme integration at AFRO (establishment of an Integration Task Force with a CB sub-group, etc.), MLM training remains a predominantly vertical event.</li> <li>➤ Available assumptions of contribution of training in improvement of immunization coverage and quality and disease reduction remain to be researched.</li> <li>➤ There is a “tick” bottleneck between pre-service training and national EPI services due to inconsistencies of outdated curriculum of pre-service institutions (results of most TNAs) and current practices of EPI applying innovations and new technologies.</li> <li>➤ <b><i>The follow up of trained managers or facilitators has not been consistent both at regional and country levels.</i></b></li> </ul>	<ul style="list-style-type: none"> <li>◇ Lack of reliable database on EPI training activities.</li> <li>◇ Insufficient involvement and use of private sector in training.</li> <li>◇ Most of the country EPI plans were oriented towards training without touching other components of CB (e.g. HRD, empowerment of service users, institutional development, etc.).</li> <li>◇ Lack of updated EPI curriculum as well as reference materials (including MLM modules), didactic and demonstration tools at training institutions.</li> <li>◇ Lack of training materials in local languages.</li> </ul>

## c. Opportunities

<b><i>For Regional programme</i></b>	<b><i>For countries</i></b>
<ul style="list-style-type: none"> <li>➤ Availability of well formulated CB plan developed at MLM courses and approved by ICC increases possibility of partner support.</li> <li>➤ AFRO’s experience using co-facilitators from national participants during Inter-country courses increases the pool of national facilitators for the future MLM training at country level</li> <li>➤ Intake of participants from the host country is usually high at inter-country MLM courses (usually 10-15 participants) - a good opportunity to build up a national facilitators’ pool for cascade training.</li> <li>➤ AFRO and country EPI managers should use all opportunities in training by other disease control programmes (RBM, IMCI, HIV/AIDS), and include key EPI modules in the syllabus of their training courses. From the other hand, these programmes may benefit from the reach experience and well defined training methodologies of the EPI MLM course.</li> </ul>	<ul style="list-style-type: none"> <li>◇ Introduction of new vaccine is an opportunity to train/retrain health workers on EPI.</li> <li>◇ GIVS and RED strategies open new opportunities to reach every child in the country. Immunization programmes should train health workers on these strategies. They should also be integrated in the curricula of training schools.</li> <li>◇ National immunization programme reviews create an opportunity to integrate training needs assessment exercise in the review process saving resources otherwise needed for an isolated TNA.</li> </ul>

*e. Threats*

<i>To the Regional programme</i>	<i>To the country programmes</i>
<ul style="list-style-type: none"> <li>➤ As the MLM training programme is mainly financed by the extra-budgetary contributions, any decrease or discontinuation of donor support will hamper implementation of the training plans.</li> <li>➤ Delays in finalizing remaining 10 MLM modules of full-course option (24 modules) may create impression among participants that their training in EPI is incomplete.</li> <li>➤ Continuing vertical zed EPI MLM training may cause loss of interest in it by national authorities and certain partners whose mandate stands for integration of child health programmes.</li> </ul>	<ul style="list-style-type: none"> <li>◇ High attrition rate of health staff at management level may demoralize HRD planners due to brain drain of qualified personnel resulting continuous need of training new comers.</li> <li>◇ Competing priorities may affect national funding (by countries and local partners) for MLM training on immunization.</li> <li>◇ Excessive integration of programmes within a child health package may dilute the essentials of immunization programme resulting in poor management of complex programmatic areas of EPI (logistics, cold chain, vaccine handling etc.)</li> </ul>

## 7. Conclusions and Lessons Learnt

The evaluation of the Mid-Level Management training in the African Region was conducted in two phases: internal evaluation (2004-2005) and external evaluation (April-May 2005) which included AFRO and some selected countries: Ethiopia, Ghana, Lesotho, Senegal and Zambia. The evaluation team comprised experts and consultants from WHO, UNICEF, USAID, UNF, NESI and key national participants. The methodology of the evaluation included desk review of EPI documentation, field visits and observations, interviews with key stakeholders, participants and facilitators and country based partners.

The findings from the internal evaluation and individual country evaluations is consolidated into this overall evaluation report reflecting the regional trends, strategies, historical evolution and achievements as well as diversities and common grounds in MLM training in various country situations.

### Achievements:

- Many countries in African Region conducted programme reviews and training needs assessment (14 TNAs during 2002-2004) to identify gaps in the management of national immunization programmes and needs in training to address these gaps.
- The year 2000 is the beginning of the significant progress in EPI mid-level management training at inter-country and country levels. During 2000-2004, 11 MLM courses were held and 642 participants were trained including 416 EPI managers, 110 teachers/professors and 114 WHO/UNICEF EPI focal persons. Countries visited expanded the MLM training through cascading it to province/region and district levels.
- There is a set of well elaborated, structured and learner-friendly modules developed by AFRO which have undergone a series of testing, validation by experts and MLM course participants. They were well adapted and were unique for African region. Some countries adapted AFRO MLM modules to suit their country situation.
- Faculty of inter-country MLM courses comprising AFRO, WHO/ICP, UNICEF etc., is technically strong, experienced and able to run the MLM course with active, adult learning methodology and problem-solving approach. Each country visited had a pool of facilitators to run a self-sufficient MLM course.

- MLM training programme is based on RC Resolutions of WHO/AFRO, Regional 2001-2005 Immunization Strategic Plan, TFI recommendations, TNAs and national programme reviews.
- The programme has a tremendous support and involvement by partners who consider MLM training as a joint venture. Country based partners consider MLM training as a “Good value for money”. Current evaluation exercise was a good example of collaboration, having evaluators from WHO, UNICEF, UNF, USAID, NESI.
- Programme has effective leadership at AFRO, WHO/ICP levels to promote, plan and implement MLM training which is seen as a major component of capacity building. This has enabled AFRO to move from ad hoc training to planned training by MLM courses fairly distributed in time, by WHO official languages in the Region and by WHO Inter-country Epidemiological Blocks.
- During AFRO MLM training, CB plans were developed by countries. Some of these plans have already been funded by AFRO and partners.
- About half of the countries of the African Region (including all five countries visited by the team) conducted national MLM courses using the generic or adapted AFRO MLM course modules to train their national and sub-national EPI managers.
- An “explosion” occurred in training of academic staff in 2003-2004 courses during which around 100 professors and teachers were trained in MLM. Each of four MLM courses trained an average of 25 of them who, going back to their institutions, introduced change in EPI teaching based on new developments and strategies in EPI (GIVS, RED).
- Through perception of users and country based partners, satisfaction index results and observations in the field during the external evaluation, the evaluation team concluded that the MLM training has increased the performance of the trained staff and therefore contributed to the improvement of EPI coverage in the African region (DPT3 regional coverage was 49%- in 1991; 53%- in 2001 and 69%- in 2004. JRF, 2005). Similar improvements in DPT3 coverage rates have been observed in all visited countries.
- The average cost of inter-country MLM course is more than twice as high (US\$ 1890) as the in-country courses (US\$ 900). However, in spite of the high costs of the inter-country MLM courses, they need to be continued in view of a number of advantages they offer to the national participants. These courses:
  - provide a forum to exchange experiences among various countries within the African Region as well as other regions (extra-regional experience);

- bring together internationally recognized immunization experts and national managers to share theory and practice in programme management;
- update participants and facilitators on the latest technical achievements in the immunization programme;
- inform the audience on latest recommendations, strategic visions and deliberations of global and regional bodies (WHA, WHO and UNICEF Regional Committee meetings, TFI, ARICC, GAVI, TECHNET, etc.);
- for many national participants it is a unique opportunity to travel abroad and have a short break from their routine day to day working environment.

### **Challenges**

- Despite practical steps towards programme integration at AFRO (establishment of an Integration Task Force with a CB sub-group, etc.), MLM training remains a predominantly vertical event.
- There is a lack of updated EPI curriculum as well as reference materials (including MLM modules), didactic and demonstration tools at training institutions.
- There is a “thick” bottleneck between pre-service training and national EPI services due to inconsistencies of outdated curriculum of pre-service institutions (results of most TNAs) and current practices of EPI applying innovations and new technologies.
- The follow up of trained managers or facilitators has not been consistent both at regional level and in countries visited. One of the reasons, according to lessons learned during the evaluation, was the lack of a reliable database on EPI training activities to manage the follow up of participants (and facilitators too!), to keep the institutional memory on training and support capacity building analysis by programme management.
- There is an insufficient involvement and use of private sector in training at all levels.
- Most of the country EPI plans were oriented towards training without touching other components of CB (e.g. HRD, empowerment of service users, institutional development, etc.).
- At country level, there is a lack of training materials in local languages.

## 8. Looking Forward – Recommendations

Based on this comprehensive internal and external review of the MLM training, there is a need for AFRO, partners and national authorities to:

1. Strengthen the teaching of EPI in the basic training of health personnel to equip the new graduates with the necessary skills and knowledge in line with Global Immunization Vision and Strategies and Millennium Development Goals. Key issues to be addressed include:
  - ◇ Encourage countries to link professional education and academics with service realities and remove the bottleneck between pre-service and in service training.
  - ◇ Develop an EPI generic curriculum for pre-service training institutions and disseminate it through workshops and seminars at country level.
  - ◇ As a matter of urgency, AFRO, NESI, UNICEF, BASICS, CVP/PATH and other concerned partners and national immunization programmes should provide training institutions in the Region with available reference materials, training tools and demonstration equipment needed at classroom level.
  - ◇ Involve more teachers in training courses on immunization
2. In view of well developed training programme and coverage of wide range of managerial and operational topics in EPI MLM course, consideration should be given to institutionalization of the MLM course in three public health training centres in the Region for English, French and Portuguese speaking countries. This will also facilitate integration of other DPC programmes into the MLM training (e.g. IMCI, RBM).
3. AFRO should be encouraged (and supported) to complete entire MLM course by developing the remaining modules. Depending the duration and the objectives of the course, these modules could be included in the syllabus of the ongoing course or used as reference documents. They can also be used for on-the-job training.
4. In view of cost efficiency of the in-country training, partners should increase their support to MLM training at country level for management staff. AFRO should continue its strategy to involve more participants from the host country in inter-country workshops with an aim to build up a large pool of national managers and facilitators for implementation of the national capacity building plan.
6. Countries should be encouraged to integrate EPI training at district level harmonizing training content, materials, approaches and methods with other programmes providing training in related content (IMCI, RBM, etc.).
7. There should be a specific follow up of the implementation of the TNA recommendations both at AFRO and country level. AFRO should include a specific

item on TNA in the regional/inter-country meeting agenda and regularly ask countries to supply data on implementation status of recommendations.

8. AFRO should maintain an inventory of all training materials produced by the Regional Office, ICPs and countries as well as inventory of all inter-country training courses with the following standard information:
  - ◇ Overall course report with evaluation results;
  - ◇ List of participants and facilitators;
  - ◇ Total cost of the training course and shared cost per partner
  - ◇ Cost per course participant.Similar databases should be maintained by EPI units at country level.
9. In selecting TOT participants for facilitation in the main MLM course, AFRO should give preference to candidates from the “facilitator’s pool” who had previously co-facilitated a MLM course. This will serve as refresher training for selected facilitators and ensure high quality of facilitation.
10. For the better administrative arrangements, especially the venue, accommodation and catering services, AFRO should ask host country and local organizing committee to consider above items a priority in their course preparation programme. The course directors should review the administrative arrangements before the main course in line with recommendations of previous MLM course participants.
11. AFRO should conduct further operational research on impact of training.

### **Way Forward**

Based on the findings and recommendations of this evaluation, the following key actions are proposed as a way forward for the period 2006-2010:

- As the 2001-2005 capacity building strategic plan comes to the end at the end of current year, the preparations for the new plan for the next 5 years- 2006-2010 should start as soon as possible. The training in immunization programme management, as a priority issue, will have a prominent place in the plan which will be based on challenges of Millennium Development Goals, Global Immunization Vision and Strategies, RED initiative and the Regional EPI strategic Plan 2006-2010.
- Mid-level management training should be streamlined, harmonized with other training packages for various levels of health system, monitored and evaluated to ensure high quality pre-service and in-service training.
- A prototype curriculum on immunization for training institutions should be developed by the WHO Regional Office to address inconsistencies between academic teaching and service delivery practices. This should be widely distributed in the Region. To ensure its acceptability and adoption, Health and Education Ministries, National Regulatory Authorities should be involved in the process. To achieve this, more of their representatives should be invited to participate in future MLM courses or similar fora where training is in the agenda.

- As the immunization programme is characterized by rapid progression, a need for innovative strategies as well as revised and updated EPI norms and standards is obvious. Consequently the regular revision and standardization of the existing guidelines, tools and training materials will be necessary. To ensure rapid response to changes and dissemination of updated knowledge in EPI to national programmes and training institutions, the electronic arsenal of the VPD/AFRO and countries need to be strengthened.
- The support to Inter-country and in-country MLM training should be sustained. The two have comparative advantages which should be well demonstrated to partners and countries to ensure their continuous support. The current trend of involving WHO, UNICEF and other partner staff in MLM training should continue to enable them provide stronger technical and management support to countries.
- The in-service training, especially at district level, needs to be promoted as an essential on-going activity. In the new period refresher training should be offered to MLM course past participants and facilitators. A functional training database should be maintained to track and evaluate training effectiveness and impact.
- The 2006-2010 strategic plan should suggest innovative strategies for more involvement of private sector in immunization activities in line with private-public mix approach to maximize resources for immunization. MLM courses should open doors to representatives of private institutions and NGOs involved in immunization.
- Operational research, as an element of decision making, should be carried out to look into the reasons of high attrition and turnover rates of trained nationals, the contribution of management training in the improvement of vaccination coverage, reduction of morbidity/mortality from vaccine preventable diseases, etc., and to provide evidence-based data in the measurement of MDG and AFRO strategic plan targets.
- It is essential to maintain and further expand EPI partnerships to ensure the sustainability of immunizations in the new period when the new vaccines and technologies may require additional resources.

# **Annexes**

## **Annex 1 – Terms of Reference for MLM Summative Evaluation**

### **(a) As regards inter-country EPI MLM training**

- Revisit and make critical analysis of EPI MLM training process, describe and assess its steps and pedagogical scenarios;
- Assess the syllabus of the EPI MLM courses at inter-country level including training of trainers (TOT) sessions;
- Assess the relevancy of the materials, methods and tools used for EPI MLM teaching, learning, evaluation and follow-up;
- Describe the target audience and analyze the participants and facilitation profile;
- Assess the administrative arrangements for the training courses;
- Assess the course and participants' performance evaluation system;
- Assess how facilitators and participants judge the inter-country EPI MLM course based on their views about the objectives, content and the process (reaction evaluation);
- Determine if facilitators and participants understand, accept and were able to use the MLM course methods and materials ( theoretical learning evaluation)
- Make cost estimations regarding inter-country courses;
- Describe immediate and long-term benefits/impact of MLM training;
- Assess the level of current and potential support by countries and partners for EPI MLM training in the African Region;
- Propose areas of improvement in mid-level management training to better match with health performance;
- Identify strengths, weaknesses, opportunities and threats of the EPI MLM training to meet international and national immunization programmes needs;
- Identify actions and resources needed to strengthen and sustain EPI MLM training;
- Make recommendations addressing challenges at regional and country levels.

**(b) As regards in-country EPI MLM training:**

- ◇ Collect information on MLM training on EPI: course materials, course syllabus, teaching methods, organization of the training process, pool of facilitators, participants' profile, follow up of participants after training, etc.;
- ◇ Review the tracking system of past EPI MLM course participants;
- ◇ Conduct interviews with individual participants;
- ◇ Conduct Focus Group Discussions (FGD) with participants and facilitators;
- ◇ Conduct interviews with supervisors of MLM course participants.
- ◇ Based on the above information,
  - ◆ determine if participants demonstrate expected knowledge and skills in EPI management (practical learning evaluation)
  - ◆ assess whether participants' performance at their jobs has improved (performance evaluation)
  - ◆ assess the level of contribution of EPI MLM training to the improvements of immunization coverage and reduction of morbidity/mortality from vaccine preventable diseases (VPD) based on the perception of managers, supervisors and stakeholders (effects or impact assessment).
  - ◆ calculate and make an assessment of the following:
    - participant attrition rate (% left health services or the country)
    - participant turnover rate (% left EPI but still employed within the health services)
    - participant satisfaction rates on various aspects of the MLM training
    - professional or Career gains of participants attributed to EPI MLM training;
- ◇ Take note of recommendations by participants/supervisors and assess the level of implementation;
- ◇ Visit pre-service and in-service training institutions which have been reviewed during TNA exercise to verify the extent of implementation of the recommendations;
- ◇ Discuss with stakeholders and key local partners in EPI training to assess whether they were satisfied with investments made towards MLM training;
- ◇ Collect information on the cost of MLM training at national MLM courses
- ◇ Assess possible direct and collateral benefits of the MLM training to document:
  - progression of the EPI coverage for the past 5 years in the countries reviewed
  - improvement if any in disease surveillance activities
  - improvement in planning/micro-planning and monitoring of implementation
  - improvement of collaboration among stakeholders and partners;
- ◇ Prepare a country report and provide feedback to stakeholders and partners.

## **Annex 2: Evaluation Team Composition and Periods of Country Visits**

### **1. Ethiopia: 18-22 April 2005**

#### **Visiting Team Members:**

Dr. L. Arevshatian WHO/AFRO STC, T/Leader  
Dr. Ch. Goilav NESI, Antwerp, Belgium  
Mrs. B. Toure UNICEF, Southern Sudan,  
Kenya

#### **National Core Members:**

Dr. Asnakew Yigzaw National EPI  
Manager  
Dr. Assefu Lemlem WHO/NPO/EPI  
Dr. Telahun Teko AAU/ Medical Faculty  
Prof. Ayele G/Mariam Consultant/Paediatrician  
Dr. Assefa Sema AAU/Medical  
Faculty

### **2. Ghana: 9-13 May 2005**

#### **Visiting Team Members:**

Dr. L. Arevshatian WHO/AFRO STC, T/Leader  
Ms. A. Gay UN Foundation  
Ms. L. Shimp USAID  
Dr. F. Avokey WHO/ICP/Abidjan

#### **National Core Members:**

Dr. V. Ankrah UNICEF/Ghana  
Mr. S. Diamenu WHO/Ghana  
MS. R.A. Amisshah EPI/Ghana

#### **Reinforcement Team Members:**

Dr. K.O. Antwi National EPI Manager  
Dr. M. Eshetu EPI Officer/WHO, Ghana  
Dr. G. Lamiri EPI Officer/WHO, Ghana

### **3. Lesotho: 2-6 May 2005**

Dr. L. Arevshatian WHO/AFRO STC, T/Leader  
Dr. S. Sackey DPC/WHO, Lesotho  
Dr. A. Munyiri UNICEF Prog. Officer, Health  
Mrs. T. Kitleli FHP Officer, WHO, Lesotho  
Ms. B. Thokoane Acting National EPI Manager

### **4. Senegal: 2-6 May 2005**

Dr Nablé Yaya COULIBALY WHO/AFRO,  
Consultant , Team Leader  
Dr Amadou FALL WHO/ICP WA  
Pr André MEHEUS NESI, Antwerp/Belgium  
Dr Boniface Mutomba Consultant/USAID  
Paryss KOUTA UNICEF Regional Office  
Dr Mohamed Boss DIOP WHO/ Senegal  
Dr Aziz NDIAYE WHO/Senegal  
Dr Fatoumata DIAWARA UNICEF/Senegal  
Dr Elhadj Mamadou NDIAYE DP/ MSPM  
Mr Moustapha Diop ENDSS  
Mme Thiaba THIAW MBENGUE DRH/ MSPM

### **5. Zambia: 11-15 April 2005**

Dr. L. Arevshatian WHO/AFRO STC, T/Leader  
Prof. A. Meheus NESI, Antwerp, Belgium  
Ms. A. Lambin NESI, Antwerp, Belgium  
Dr. M. Mumba WHO/AFRO, ICP/SA  
Dr. A. Onyeze EPI Team Leader, WHO/Zambia  
Dr. H. Mutambo EPI Officer, WHO/Zambia  
Mr. F. Zulu EPI Officer, UNICEF, Zambia  
Mrs. M. Kaoma EPI Specialist, HSSP/USAID  
Dr. M. Nalubamba Phiri Dept of Paediatrics, UTH  
Mr. A. Din National EPI Cold Chain Officer  
Mr. D. Cheembo EPI Logistician, UCI/ MOH

**ANNEX 3: List of WHO/AFRO EPI Mid-Level Management (MLM) Course Evaluation Tools (ET)**

1. **ET-1:** Information on Training in EPI (for country visits)
2. **ET-2:** Interview Questionnaire for Training Institutions
3. **ET-3:** Interview with MLM Course Participant
4. **ET-4:** Interview with MLM Course Participant who left his/her position in EPI
5. **ET-5:** Ten Questions to Participants who attended EPI MLM Course (2000-2003)- sent to the countries with a letter and list of participants to be interviewed by EPI Focal Points at country level
6. **ET-6:** Interview with Supervisor of the Past MLM Course Participant
7. **ET-7:** Focus Group Discussion (FGD) with ongoing MLM Course Participants
8. **ET-8:** Observation Form for an EPI Classroom Session
9. **ET-9:** Focus Group Interview with Members of Facilitators' Pool
10. **ET-10:** Interview with AFRO Capacity Building Officer (CBO)

#### Annex 4: Reorganized MLM course modules for various options

Expanded Modular Blocks: Full course option	Selected core modules option
<p><b>BLOCK 1: Introductory modules (0-3)</b>  <b>Module 0:</b> Introduction  <b>Module 1:</b> Problem-solving approach to immunization services management  <b>Module 2:</b> Role of the EPI manager  <b>Module 3:</b> Communication for immunization programmes  <b>Reference:</b> <i>Communication Handbook for Polio and Routine EPI</i></p>	<p><b>Module 0:</b> Introduction  <b>Module 1</b> Problem solving approach to immunization services management  <b>Module 2</b> Role of the EPI Manager  <b>Module 3</b> Communication for immunization programmes</p>
<p><b>BLOCK II: Planning/organization (4-6)</b>  <b>Module 4:</b> Planning immunization activities  <b>Module 5:</b> Increasing immunization coverage  <b>Module 6:</b> Reduce drop-out and missed opportunities  <b>Reference manual:</b> <i>Revised EPI Planning Guide</i></p>	<p><b>Module 4:</b> Planning immunization activities  <b>Module 5:</b> Increasing immunization coverage</p>
<p><b>BLOCK III: Logistics (7-14)</b>  <b>Module 7:</b> Planning, monitoring and supervising EPI logistics  <b>Module 8:</b> Cold chain management  <b>Module 9:</b> Vaccine management  <b>Module 10:</b> Immunization safety  <b>Module 11:</b> Transport management  <b>Module 12:</b> Logistics management for supplemental immunization  <b>Module 13:</b> Logistics for surveillance  <b>Module 14:</b> Maintenance  <b>Reference material:</b> <i>Product Information Sheets, WHO/UNICEF, 2000</i></p>	<p><b>Module 8:</b> Cold chain management  <b>Module 9:</b> Vaccine management  <b>Module 10:</b> Immunization safety</p>
<p><b>BLOCK IV: New vaccines (15)</b>  <b>Module 15:</b> New vaccine introduction</p>	<p><b>Module 15:</b> New vaccine introduction</p>
<p><b>BLOCK V: Supplemental Immunization (16-17)</b>  <b>Module 16:</b> How to organize effective polio NIDs  <b>Module 17:</b> How to conduct mass campaigns with injectable vaccines (measles, YF, TT)  <b>Reference manuals:</b>  1. Field guide for supplementary activities aimed at achieving polio eradication (revised version, 1996)  2. Guidelines for improving the quality of NIDs  3. AFRO field guide for quality measles SIAs</p>	

<p><b>BLOCK VI: Disease surveillance (18-19)</b>  <b>Module 18:</b> How to manage cases of priority diseases  <b>Module 19:</b> Integrated disease surveillance and response (see IDSR modules)  <i>Reference manuals:</i>  1. Technical guidelines for integrated disease surveillance and response in the African Region  2. District health team surveillance data analysis</p>	<p><b>Module 19:</b> Integrated disease surveillance and response (see IDSR modules)</p>
<p><b>BLOCK VII: Monitoring and evaluation (20-23)</b>  <b>Module 20:</b> Monitoring and data management  <b>Module 21:</b> Supportive supervision by EPI managers  <b>Module 22:</b> Conducting EPI coverage survey  <b>Module 23:</b> Conducting assessment of the immunization programme  <i>Reference:</i> <i>Guide for Preparation of Integrated Supervisory Checklist for Disease Prevention and Control Activities at District Level, Oct. 2003, AFRO</i></p>	<p><b>Module 20:</b> Monitoring and data management  <b>Module 21:</b> Supportive supervision by EPI managers  <b>Module 23:</b> Conducting assessment of the immunization programme</p>
<p><b>BLOCK VIII: EPI training materials (24)</b>  <b>Module 24:</b> Facilitator's guide  <i>Other Training Tools and Guides:</i> EPI training kit; Course Director's guide</p>	<p><b>Module 24:</b> Facilitator's guide</p>