

General Data Dissemination System (GDDS) Project - Phase 2
Socio-Demographic Statistics Project for Anglophone Africa

Module on Health Statistics
Report on the Provision
of Technical Assistance to Lesotho

Maseru, Lesotho
March 17-28, 2008

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World Bank

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Table of Contents

Introduction

1. Summary and main findings
2. Observations about the situation in the country
3. Remarks about the Agenda and the discussions

Acknowledgements

Abbreviations

Main Text

4. Priorities
5. Activities
6. Deliverables
7. Design and content of the module
8. Wider issues of the topic in the country
9. Intended deliverables of the country
10. Agreed time frame of the actions and the dates for the next missions
11. Working relations
12. Preparation issues
13. Recommendations on priorities, objectives, activities and working conditions, the TOR
14. Other donors involved

Not content related

15. On travel
16. On contracting
17. On the next missions
18. Final reflections

Annexes

1. Description of the preparations
2. Agenda
3. Notes drafted
4. Relevant documents from the partners
5. Relevant general information
6. Other

Introduction

1. Summary and main findings

The Kingdom of Lesotho requested technical assistance from the World Bank to strengthen its health information system. The objectives of this technical assistance address two priorities proposed at an inter-country workshop convened in Botswana in 2007. These priorities are: to assist in drawing a strategic plan of health information system strengthening in the country and to assist in establishing a health district data warehouse.

Lesotho started the process of HIS strengthening with applying an [Assessment Framework](#) proposed by the [Health Metrics Network](#). This assessment is published in a Report published in 2007. The Assessment Report, together with other relevant documents was the basis for implementing an HIS strategic planning process that followed the guidance of the Health Metrics Network. A draft Health Information System strategic plan constitutes a major product of this mission (Annex A1).

2. Observations about the situation in the country and fine tuning of objectives

The World Bank is providing technical support in the area of health information system to Lesotho with financial support from the Department for International Development (DFID) of the United Kingdom. Lesotho attended a GDDS-2 Launch Workshop in Gaborone, Botswana, in October 2007 where the countries identified priorities for technical assistance. The two priorities of technical assistance that were selected at Gaborone were to help in the finalization of the Strategic Framework for Health Statistics and in the development of the district data warehouse. These two priorities are complementary to each other and may contribute to substantial strengthening of the national health system. Additionally, the timing of this technical assistance coincides with a call for proposals of the Global Fund (GF), Round 8 (the deadline is 30 June 2008). It is recommended that further work is done to use the results of the strategic planning to be used in preparing a GF proposal. The proposal would contain elements of strengthening the health system (HSS), including the health information system (HIS). It seems that a Global Fund support would be an excellent opportunity to implement an HIS strengthening programme presented in the Strategic Plan.

3. Remarks about the Agenda and the discussions

At the beginning of the mission a draft agenda was discussed in detail with the Ministry of Health and Social Welfare. It was decided to follow the most recent guidance provided by the Health Metrics Network (<http://www.who.int/healthmetrics/en/>) for health information system strategic planning. It was also agreed that two meetings will be held with a larger group of stakeholders. One meeting was a two days meeting of a Core Team (CT) and a second meeting was a one day meeting of the Stakeholder Working Group (SWG). The remaining part of the mission was devoted to working with staff of the MoHSW on the preparation of the HIS Strategic Plan.

Acknowledgements

The consultant would like to thank Mr Ronald Luttikhuizen, the GDDS Manager for having given this opportunity to support a Module for the Health Statistics in Lesotho.

Abbreviations

CT	Core Team
DFID	Department for International Development (UK)
DQAF	Data Quality Assessment Framework
GDDS2	General Data Dissemination System Phase 2
HIS	Health Information System
HMIS	Health Management Information System
HMN	Health Metrics Network
HPSD	Health Planning and Statistics Department
HSS	Health System Strengthening
ICT	Information Communication Technology
IMF	International Monetary Fund
IT	Information Technology
MoHSW	Ministry of Health and Social Welfare
MoLGC	Ministry of Local Government and Chieftaincies
SWG	Stakeholder Working Group
TA	Technical assistance
TOR	Terms of Reference
WB	World Bank
WHO	World Health Organization

Main Text

4. Priorities

According to the Terms of References the following two priorities were agreed in Lesotho:

Priority 1 is to finalize the strategic framework for Health Statistics (16% of total time)

Priority 2 is to assist in the development of a district data warehouse (84% of total time)

For Priority 1, the objectives stated in the terms of reference are:

- To discuss the present situation, questions on the Framework and options.
- To conduct in-depth discussions with relevant institutions if needed.
- Advise and assist about the way to finalize the document

5. Activities

The activities proposed in the terms of reference were:

- To review the present documentation that has been produced.
- To review the work plan discussed in Botswana, assess and determine whether there is any need for changes to the work plan.
- To very briefly discuss the main issues to be covered in the second experts visit and the work needed to prepare for this.
- To draw up a list of advices and assistance given, and points to look into

6. Deliverables

The deliverables required in the terms of reference were:

- Finalization of the reviewed Framework, including possibly with a list of next steps, together with time scales and work needed to be done; included in Annex A1 of the Report
- A situational analysis report and fine-tuning of objectives; included in Item 2 of the Report
- A brief report on the Lesotho Health Statistics as a system, and their needs; included in the HIS Assessment Report
- Report on any training requirements needed for statistical staff in the Health Statistics system; included in draft strategic plan
- A draft list of key indicators Lesotho would wish to disseminate by the end of the GDDS Module on Health included in draft strategic plan
- A list of work needed between the first and second expert visits
- Draft a mission report for the file of the country on the discussions held in the appropriate format.
- Draft a mission report for the World Bank according to the format provided

7. Design and content of the module

The module on Health Statistics to Lesotho consists of two parts. One relates to strategic planning of the health information system, the second part covers the development of a district health data warehouse. These two components, implemented in a sequence, facilitate a concerted effort of assistance to strengthen the country health information system.

This report concerns the first part of the health statistics module. The design of this first part consisted of the preparation and facilitation of two meetings and group work with the staff of the Health Planning and Statistics Department (HPSD) of the MoHSW.

The activities during the mission included:

Monday, 17th March 2008

Meeting with Ms Mahlape Ramoseme, Chief Statistician, Ministry of Health, Dr John Nkonyana, Epidemiologist, MoH, Dr Davies Rumisha, Monitoring and Evaluation Advisor, MoH.

Subjects discussed:

Review and tuning up mission objectives and deliverables, logistics; principles of strategic planning. The schedule of work is included in Annex B.

Tuesday, 18th March 2008

Meeting of the Core Team

Present: Ms Mahlape Ramoseme; Mrs M. Dikoti, Ministry of Local Government and Community; Mrs M. Mokale, Christian Health Association of Lesotho; Mr Moseli Khoeli, Bureau of Statistics; Ms M. Makara-Monyama, MoHSW; Ms T. Ramathlapeng, MoHSW, Dr John Nkonyana, Epidemiologist, MoH, Dr Davis Rumisha, Monitoring and Evaluation Advisor, MoH

Subject:

Review of HIS Assessment

Defining of priority HIS subsystems and problems

Selecting strategic objectives and interventions

Wednesday, 19th March 2008

Meeting of the Core Team

Present: Ms Mahlape Ramoseme; Mrs M. Likoti, Ministry of Local Government and Community; Mrs M. Mokale, Christian Health Association of Lesotho; Mr Moseli Khoeli, Bureau of Statistics; Ms M. Makara-Monyama, MoHSW; Ms T. Ramathlapeng, MoHSW, Dr John Nkonyana, Epidemiologist, MoH, Dr Davis Rumisha, Monitoring and Evaluation Advisor, MoH

Subject:

Selecting strategic objectives and interventions, Intervention implementation phasing, Detailed HIS planning and costing

Thursday, 20th March 2008

Staff work

Present: Ms Mahlape Ramoseme, Chief Statistician, Ministry of Health, Dr John Nkonyana, Epidemiologist, MoH, Dr Davis Rumisha, Monitoring and Evaluation Advisor, MoH.

Preparation of the HIS strategic framework

Friday, 21st March 2008

Staff work

Present: Ms Mahlape Ramoseme, Chief Statistician, Ministry of Health, Dr John Nkonyana, Epidemiologist, MoH, Dr Davis Rumisha, Monitoring and Evaluation Advisor, MoH.

Preparation of the HIS strategic framework

Sunday, 23 March 2008

Meeting with Dr William J. Bicknell, MD, MPH, Director, Lesotho-Boston Health Alliance. Mutual briefing about the objectives and activities of WB programme to strengthen the health information system and current activities of the Lesotho-Boston Health Alliance.

Monday, 24th March 2008

Staff work

Preparation of the HIS strategic framework

Tuesday, 25th March 2008

Staff work

Present: Ms Mahlape Ramoseme, Chief Statistician, Ministry of Health, Dr John Nkonyana, Epidemiologist, MoH, Dr Davis Rumisha, Monitoring and Evaluation Advisor, MoH.

Preparation of the HIS strategic framework

Wednesday, 26th March 2008

Meeting with the Global Fund Coordinating Unit, Ministry of Finance and Development Planning.

Present: Ms Nkhala Sefako, Global Fund Coordinator, Member of CCM

Mr Mokhothu Makhalanyaane, Global Fund Capacity Building Officer

Staff work

Present: Ms Mahlape Ramoseme, Chief Statistician, Ministry of Health, Dr John Nkonyana, Epidemiologist, MoH, Dr Davis Rumisha, Monitoring and Evaluation Advisor, MoH.

Preparation of the HIS strategic framework

Thursday, 27th March 2008

Meeting of the Stakeholder Working Group

Present: see SWG Participants List

Agenda of the SWG meeting (see Annex B.2)

Friday, 28th March 2008

Meeting with Ms Mahlape Ramoseme, Chief Statistician, Ministry of Health, Dr John Nkonyana, Epidemiologist, MoH, Dr Davies Rumisha, Monitoring and Evaluation Advisor, MoH.

Meeting with Mrs

Review and discussion of the deliverables

Discussion of next steps

8. Wider issues of the topic in the country

The mission comes in a very important time and opportune time when a call for proposal for Round 8 of the Global Fund is issued. This year there is a renewed emphasis on including a health system strengthening proposal that would also cover the strengthening of the health information system. This would give an excellent opportunity to mobilize resources for implementing the HIS strengthening interventions specified in the Strategic Plan. Another wider issue that should be mentioned relates to active participation in the strategic planning of some key players of the health information system from outside the health sector, that is the Bureau of Statistics and the Ministry of Local Government.

9. Intended deliverables of the country

The intended deliverables of the country include a health information system strategic plan, including a list of next steps and a timetable for their implementation; a description of current situation; a brief report on the Lesotho Health Information System; a description of training requirements for health information staff; and a list of key health indicators in Lesotho.

10. Agreed time frame of the actions and the dates for the next missions

Discussions were held with the Ministry of Health on the timing of the second mission. It was suggested that this mission take place as early as a suitable consultant is identified. Alternatively, the second mission might usefully be devoted to the preparation of a Global Fund Round 8 proposal for the strengthening of health systems with special emphasis on health information. In this case, the second mission should be fielded shortly because the deadline for submission of a Global Fund Round 8 proposal is the 30th June 2008.

If the development of district Data warehouse for the second Priority is retained, as originally foreseen in the Plan of Work, it is proposed that the [Health Information Systems Programme \(HISP\)](#) be contacted for a suitable expert. The HISP is a world class institution with proven capacity to successfully carry out similar project in many countries of the Southern African Region and elsewhere in the world.

It was discussed and agreed that further work will be done on costing details of the proposed interventions to strengthen the health information system. This work should be done before fielding the second TA mission.

11. Working relations

Working relations in the Ministry of Health were very good, there was good collaboration with the Chief Statistician of MoHSW as well as with other health statistics stakeholders who participated in the preparation of the HIS strategic plan.

12. Preparation issues

The expert exchanged several e-mails and arranged a number of long distance phone calls with the MoH Chief Statistician before the actual mission took place. These preliminary exchanges of working documents helped in achieving mission objectives.

13. Recommendations on priorities, objectives, activities and working conditions, the TOR

The country priorities that were included in the Lesotho plan of work are relevant to the existing country conditions and needs. The [Health Metrics Network](#) in its [Framework](#) recommends starting the process of HIS strengthening with [a comprehensive assessment](#), followed by formulation of a strategic plan. Subsequently, designing of a district based data workhouse is a logical element of implementing an HIS strengthening plan. So, generally speaking, the activities supported by the World Bank follow the current world standards of health information system strengthening, as suggested by the Health Metrics Network.

The World Bank/IMF GDDS structure for analyzing statistical system was taken into account while discussing the HIS strategic plan. This is reflected in the table below:

	Chapters of the Health Strategic Framework	
	HIS Assessment results	HIS objectives and interventions
1. Use of Statistics for Policy and operations	Dissemination and use of health information	review and update relevant regulatory arrangements in order to maximize health data recording, reporting, processing and sharing by all providers – public and private
2. Dissemination of Statistics	Health information dissemination and use	establish Information Clearinghouses for districts and Central levels
3. Integration frameworks (dealing with parallel data collecting)		establish SOP for health data dissemination to facilitate information sharing at these levels
4. Surveys, including analysis of administrative records	Data sources	institutionalize a unified health service and disease data collection, capture, processing as well as analysis at district level
5. Statistical registration systems and classifications used	Priority HIS subsystems and problems	
6. ICT systems and needs		develop data dictionaries and data capture guidelines for all collection and processing stations
7. Institutional arrangements, Policy, Management issues	Leadership and governance	

14. Other donors involved

During the mission two potential donors were contacted: the Global Fund and Unicef. Of particular interest is the potential collaboration and support of the Global Fund. Recently, a [call for proposals for Round 8](#) of the Global Fund was issued. This raises a possibility to strengthen the health information system as part of Health System Strengthening. The Health Metrics network published [special notes to help countries to apply](#) for the Round 8 proposal preparation. These notes provide countries with information to consider in preparing Global

Fund proposals to strengthen country health information systems under a renewed focus on Health Systems Strengthening. The notes also emphasize that countries that have completed a strategic plan that relied on the [HMN assessment](#) are especially at an advantage.

Not content related

15. On travel

Well planned and organized. The only problem encountered was the canceling of a flight between Johannesburg and Maseru because of bad weather.

16. On contracting

All the administrative contracting arrangements went flawlessly.

17. On the next missions

I will be happy to brief the expert implementing the next mission about selected technical and practical aspects of the mission.

18. Final reflections

My general impression is that this was a well prepared and implemented mission that contributed to the strengthening of the health information system in Lesotho. It allowed to use the resources and experience of the World Bank with the state-of-the-art methodology of the health information system strengthening developed by the Health Metrics Network.

Annexes

Draft HIS Strategic Plan – Annex A1

HIS strategy design and implementation planning process – Annex A2

1. Description of the preparations

The preparations for the mission included:

An update of selected references relating to HIS strategic planning – Annex C

Technical notes for use of participants of Core Team and Stakeholder Working Group meetings – Annex D

2. Agenda

Schedule of work – Annex B1

Agenda of the Stakeholder Working Group meeting – Annex B2

3. Notes drafted

Included in the report

4. Relevant documents from the partners

5. Relevant general information

List of participants of the Core Team meeting – Annex A3

List of participants of the Stakeholder Working Group meeting – Annex A4

6. Other

**Kingdom of Lesotho
Ministry of Health and Social Welfare**

Health Information System Development Strategy and Plan

Draft of 28 March 2008

**Prepared by:
Health Planning and Statistics Department
Ministry of Health and Social Welfare
March 2008
In collaboration with the World Bank**

Executive Summary

This report describes the preparation, implementation and results of a health information system strategic planning process in Lesotho. Three phases of the process can be distinguished:

Phase 1 – Leadership, Coordination and Assessment

Phase 2 – Priority Setting and Planning

Phase 3 – Implementation

Throughout the process, five basic principles for guiding health information system design, planning and implementation were observed:

- Country leadership and ownership,
- Responding to country needs and demands,
- Building upon existing initiatives and systems,
- Building upon broad-based consensus and stakeholder involvement,
- Striving for gradual and incremental progress toward the achievement of a long-term vision.

After having made an assessment using the Health Metrics Network assessment tool, phase 2, priority setting and planning is being implemented. The report refers to major results of the assessment and contains products of the HIS strategic planning process.

The Health and Social Welfare Strategic Action Plan 2000-2010 formulates a specific goal and programme objective related to the health information system.

Goal: To provide timely, relevant, accurate and complete health and social welfare information on a sustainable and integrated basis

Programme objective: To develop a simple, integrated and easily usable health management information system.

The HIS strategic planning process allowed to define priority HIS subsystems and assessment categories that need attention and strengthening. Low scoring and key questions were also taken into account as well as current and planned HIS development efforts.

Generally, the assessment revealed that there is poor data management, about half of the data collected is properly disseminated and used. There is poor performance in terms of resource allocation, planning and priority setting. There exists a system of analysis data and using and disseminating it. Vital statistics scored the lowest score, followed by health and disease records, and then administrative records. However, both census and population based survey scored very high. Quality of information in the health sector scored high, in particular, indicators of mortality, health system, health status, and risk factors.

Content

1. The Current HIS Situation

1.1 Assessment Results

1.2 Strengths and Opportunities

1.3 Priority HIS Subsystems and Information Categories

2. Vision, and Objectives

2.1 Vision

2.2 Objectives

2.3 Critical Assumptions and Risks

3. Strategies for Strengthening Priority HIS Functions

4. Summary of HIS Resource Requirements

4.1 Categories of Resources

4.2 Summary of Cost Requirements

5. Expected Products, Milestones and Benefits

6. Conclusion

Annexes

Acronyms

BOS	Bureau of Statistics
CHAL	Christian Health Association of Lesotho
DHS	Demographic and Health Survey
GFATM	Global Fund to fight AIDS, Tuberculosis and Malaria
GOL	Government of Lesotho
HIS	Health Information System
HMIS	Health Management Information System
HMN	Health Metrics Network
HPSD	Health Planning and Statistics Department
IDSR	Integrated Disease Surveillance and Response
M&E	Monitoring and Evaluation
MCC	
MOHSW	Ministry of Health and Social Welfare
MOLGC	Ministry of Local Government and Chieftancies
NGO	Non-governmental organization
WHO	World Health Organization

1. The Current HIS Situation

1.1. Assessment Results

The Kingdom of Lesotho embarked in 2006 on an HIS strategic planning process, as devised by the Health Metrics Network. It enabled national working groups to generate specific health information system planning products utilizing suggested steps, tools and formats. An assessment of the health information system was conducted and a report published in January 2007¹. Annex A includes a selected set of assessment results.

It is important to view the results of the HIS assessment in the context of six components of a health information system and six health system building blocks.

The six HIS components are:

- HIS resources
- Indicators
- Data sources
- Data management
- Information products
- Dissemination and use

The six health system building blocks are:

- Service delivery
- Health workforce
- Information
- Medical products, vaccines and technologies
- Financing
- Leadership and governance

Generally, the assessment revealed that there is poor data management, about half of the data collected is properly disseminated and used. There is poor performance in terms of resource allocation, planning and priority setting. There exists a system of analysis data and using and disseminating it. Vital statistics scored the lowest score, followed by health and disease records, and then administrative records. However, both census and population based survey scored very high. Quality of information in the health sector scored high, in particular, indicators of mortality, health system, health status, and risk factors.

1.2. Strengths and Opportunities

The ongoing decentralization of health services provides an opportunity to improve data collection and use at the point of collection. A functional central HIS unit exists with sufficient capacity in core health information sciences (statistics, demography, epidemiology and planning) to meet the national health information needs. A full description of the HIS SWOT analysis is included in Annex F.

¹ Kingdom of Lesotho, Ministry of Health and Social Welfare, Assessment of the Health Management Information System, January 2007.

The Lesotho Health Sector Strategic Action Plan 2000-2010 emphasizes that currently health information is incomplete and the social welfare service has no information system in place². Efforts have been made to create a reliable health management information system and a similar system needs to be created for social welfare. It is further argued that the extent to which the strategic plan will achieve policy objectives depends on the efficiency and effectiveness of the health information system. It is therefore imperative to refine and strengthen the current information system paying attention how the data is collected, analyzed and used.

1.3. Priority HIS Subsystems and Information Categories

An analysis of assessment results revealed the following scoring for HIS Subsystems corresponding to WHO Health System Building Blocks:

- Financing – 1.14,
- Leadership and Governance – 1.36.
- Service Delivery (Hospitals) – 1.40,
- Health Workforce – 1.40,
- Service Delivery (PHC, Districts) – 1.45,
- Medical Facilities – 1.59,
- Service Delivery (PH Surveillance) – 1.72, and
- Medicines and Supplies – 2.15.

It would therefore seem appropriate to concentrate on the following four HIS sub-systems that scored lowest and that may be considered as Priority HIS Subsystems: Financing, Leadership and Governance, Health Workforce and Service Delivery in Hospitals.

Further, an analysis was performed of the HIS Assessment results by Category of Assessment. It revealed that the lowest categories were: Data Analysis and Use – 0.0, Data Management – 0.94, Census – 1.04, HIS Institutions, HR & Financing – 1.06, and Health Service Records – 1.16.

The Core Team also reviewed individually each Low Scoring Question, that is the question that had an average score less than 1.8. Two low scoring questions were found in the HIS Sub-system of Financing, four in Health Workforce, thirteen in Leadership and Governance, one in Medicine Production, Vaccines and Technology, thirty six in Service Delivery. The team also took notice of the set of Key questions formulated in the HMN Strategic Planning Guidance. Full details of these questions are given in Annex A.

Further analysis of assessment results and of other HIS planning and monitoring and evaluation efforts allows to formulate the following priority HIS subsystems or information categories that require attention in building up an HIS strategic plan.

² Government of the Kingdom of Lesotho, Ministry of Health and Social Welfare, Lesotho Health Sector Reform, Health and Social Welfare Strategic Action Plan 2000-2010, November 2003.

A complete table of average assessment scores by HIS subsystem and assessment category is included in Annex A.

On the basis of the assessment results and other documents the Core Team attempted to define a list of priority HIS subsystems and underlying HIS problems. The list is included in Annex G.

2. Vision, and Objectives

2.1 Vision

A Health Information System (HIS) with capacity to maintain continuous support for sector planning and performance measurement at all levels for knowledge, accountability and judgment about the efficiency, effectiveness as well as sustainability of the health and social welfare care system.

2.2 Objectives

The national process of HIS strategic planning resulted in a list of performance objectives for HIS subsystems and information categories.

HIS Subsystem: Leadership and Governance

1. To review and update relevant regulatory arrangements in order to maximize health data recording, reporting, processing and sharing by all providers – public and private
2. To establish National Data Standards and institutionalize periodic quality assessment and data verification
3. To strengthen local and international networks on HMIS

HIS Subsystem: Health Workforce

1. To provide the critical mass of HMIS human resource needed at central, district and facility levels and strengthen their skills

HIS Subsystem: Service Delivery: PHC and Districts

1. To institutionalize a unified health service and disease data collection, capture, processing as well as analysis at district level
2. To strengthen district based Integrated Disease Surveillance and Response (IDSR)

HIS Information Category: HIS Resources

1. To provide information communication infrastructure for all GOL and CHAL health facilities to facilitate data capture, processing, transmission as well as reporting and health information sharing

HIS Information Category: Data Management

1. To strengthen partnership in health data collection, management and use
2. To strengthen data collection through development and implementation of metadata dictionary for all data sources
3. To improve recording, transcribing, reporting, archiving and retrieval at facility level through establishment of Electronic Medical Recording
4. To establish the capacity to generate, process and use an Essential District Health Information Package in all 10 districts

HIS Information Category: Dissemination and Use

1. To improve data use at the point of collection

2. To enhance knowledge management through strengthening capacity for data analysis and use at all levels
3. To promote and strengthen M&E at district levels so that it drives the demand for data and link data to policy implementation
4. To establish and promote mechanisms for effective interaction between data users and providers
5. To institutionalize periodic review of operational data sources, to identify duplication, identify unmet needs and devise mechanisms for correction while controlling proliferation of data collection systems

HIS Information Category: Data Sources – Vital Registration

1. To participate in improving Vital Registration coverage and capacity building for the subsystem

2.3 Critical Assumptions and Risks

The Ministry of Health and Social Welfare departments collect multitudes of data sets to provide information for benchmarking performance. Perhaps more data is collected than is needed and sometimes the data is not fully utilized. Of recent, the situation has been further complicated by the advent of HIV and AIDS which has brought on board a number of partners sometimes with specific data needs for quick accountability to their respective constituencies. Often such partners have introduced new data sets on top of the national data systems. There is therefore an element of duplication and overburdening of system. In addition, the quality of the data is compromised mainly because of the big volumes. Further more, although no formal study has been conducted to assess the cost of the data collection, it is presumed to be significant.

Attempts have also been made to rearrange the structures responsible for data collection to avoid duplication and enhance access. At national levels, the Health Statistics Unit of the MOHSW is mandated to coordinate the collection process and dissemination of timely and quality information that responds to the sector needs. Reasonable progress has been made in establishing a unified HMIS system but more efforts are needed to bring onboard HIV and AIDS data, Financial Management data and Human Resource Management data.

3. **Strategies for Strengthening Priority HIS Functions -**

The strategies for interventions to strengthen the health information system include:

In the HIS Subsystem of Leadership and Governance: Strengthen legislation to enable better data management, include private sector, establish national data standards, strengthen quality standards, develop data quality guidelines, develop national strategy for electronic medical records

In the HIS Subsystem of Health Workforce: Define training needs, staffing needs, introduce computer literacy, recruit and retain staff

In the HIS Subsystem of Service delivery: Strengthen information support to disease surveillance

In the HIS Category of HIS resources: Strengthen ICT infrastructure, strengthen data management, establishing central and district data warehouses, develop data dictionaries, data capture and processing guidelines

In the HIS Category of Data Management: Facilitate data dissemination and sharing, Strengthen surveys, national health accounts

In the HIS Category of Data Dissemination and Use: Strengthen the use of information for planning and decision making, at collection point, and other levels, Strengthen monitoring and evaluation at district level, strengthen links between users and providers of health information

In the HIS Category of vital registration: Ensure the necessary collaboration among stakeholders to achieve adequate coverage, quality and integrity of vital registration, provide necessary infrastructure for vital data collection, processing and use

4. **Summary of HIS Resource Requirements, Expected Products, Milestones and Benefits will be added**

Annexes to the Strategic Plan Document

A. Tables of the Assessment Results (average scores, low-scoring questions, and priority categories of information and HIS Subsystems)

**Matrix of HIS Assessment Scores by HIS component and Health System Building blocks
LESOTHO**

Score
 1.8
 1.2

Cutoff for Moderate Scores

Cutoff for Low Scores

Component	SubComponent	Leadership-Governance			Financing			Health Workforce			Med. Prod., vaccin., techn.			Service Delivery			Overall Average		
HIS Resources	Policy & Planning		1.05												1.72	1.72	1.72	1.72	1.23
HIS Resources	HIS Institutions, HR & Financial		0.97	0.58	0.98										1.13	1.10	1.10	1.10	1.06
HIS Resources	HIS Infrastructure		1.95					1.50							1.50	1.50	1.50	1.50	1.53
Indicators	Indicators		1.86												1.93	1.93	1.93	1.93	1.91
Data Sources	Census		1.09												1.02	1.02	1.02	1.02	1.04
Data Sources	Vital Statistics		1.86																1.86
Data Sources	Population Surveys		0.71												2.20				1.78
Data Sources	Surveillance Systems		1.76					1.58							1.44	1.64	1.36	1.36	1.50
Data Sources	Health Service Records		1.39		0.28										1.33	1.14	1.16	1.16	1.16
Data Sources	Admin Records		1.36	1.60	1.89			2.15							1.88	1.91	2.00	2.00	1.86
Data Management	Data Management		0.67	1.00	1.00										0.91	0.68	1.26	1.26	0.94
Info products	Mortality		1.57												1.78	1.54			1.67
	Morbidity		2.00												2.10				2.07
	Health System		1.78	1.13	1.55										2.02	1.91	2.00	2.00	1.86
	Risk factors														2.13				2.13
Data Use	Data use: Analysis and Use		0.00												0.00	0.00	0.00	0.00	0.00
	Data use: Policy and Advocacy		1.77																1.77
	Data use: Planning and Prioritization		1.78												1.67	1.71			1.73
	Data use: Resource Allocation		1.22	1.00												1.22			1.20
	Data use: Implementation/Action														2.05	2.39	2.39	2.39	2.24
			1.36	1.14	1.40			2.15							1.72	1.45	1.40	1.40	1.52

Low Scoring Questions

	HIS Subsystem		Item Code	Average Score
1	Financing	There is a system for tracking budgets and expenditures from all sources of finance (general government including social security and local government, donors, health insurance, out-of-pocket) disaggregated by sub national / district level	III.F.1.6	1.0
2		Data collection method	V.B.11.1	0.0
3	Health Workforce	At sub-national levels (e.g. regions / provinces, districts) there are designated full-time health information officer positions and they are filled	I.B.3	0.0
4		HIS capacity building activities have occurred over the past year for health facility staff (data collection, self-assessment, analysis, presentation)	I.B.5	1.3
5		There is a national human resources (HR) database that tracks the number of health professionals by major professional category working in either the public or the private sector	III.F.1.3	1.4
6		Routine administrative records are validated with findings from a regularly conducted health facility survey/census, labour force survey and the population census	V.B.13.1	0.0
7	Leadership-Governance	The country has up-to-date legislation providing the framework for health information covering the following specific components: vital registration, notifiable diseases, private sector data including social insurance, confidentiality, and fundamental pri	I.A.1	1.4
8		There are meetings and a multi-year plan to coordinate the timing, key variables measured and funding of nationally representative population-based surveys which measure health indicators	III.C.4.1	0.0
9		There is a system for tracking budgets and expenditures from all sources of finance (general government including social security and local government, donors, health insurance, out-of-pocket) disaggregated by sub national / district level	III.F.1.6	1.0
10		The HIS unit at national level is running an integrated "data warehouse" containing data from all data sources (both population-based and facility-based sources including all key health programmes), and has a user-friendly reporting utility accessible to	IV.A.2	0.0
11		Method used to collect the most recent major data point	V.A.1.1	0.0
12		Method used to collect the most recent major data point	V.A.2.1	0.0
13		Data collection method for most recent data point	V.A.3.1	0.0
14		Methods used to collect most recent HIV/AIDS data if generalized epidemic.	V.A.4.1.1	0.0
15		Data collection method	V.B.11.1	0.0
16		Routine administrative records are validated with findings from a regularly conducted health facility survey/census, labour force survey and the population census	V.B.13.1	0.0
17		There is continual demand for good quality and timely health information--for example for results/performance-based budgeting	VI.A.1	0.0
18		HIS information is widely used, by district and sub-national management teams to set resource allocation in the annual budget processes	VI.D.2	1.1
19		HIS information is used to advocate for equity and increased resources to disadvantaged groups and communities by e.g. documenting their disease burden and poor access to services	VI.D.3	1.0
20	Medical Products, vaccin., techn.	Each facility is required to report at least annually on the inventory and status of equipment and physical infrastructure	III.F.1.7	0.0
21	Service Delivery	HIS capacity building activities have occurred over the past year for health facility staff (data collection, self-assessment, analysis, presentation)	I.B.5	1.3
22		Percentage of health facilities submitting weekly or monthly surveillance reports on time to the district level	III.D.2.3	1.4

	HIS Subsystem		Item Code	Average Score
23		There is a systematic approach to evaluating the quality of services provided by health facilities. This includes both a) systematic standardized supervision with reporting of findings to district and national levels; and b) a health facility survey of a	III.E.1.2	0.0
24		Districts or similar administrative units compile their own monthly / quarterly, and annual summary reports, disaggregated by health facility	III.E.3.2	0.0
25		There is continual demand for good quality and timely health information--for example for results/performance-based budgeting	VI.A.1	0.0
26		Managers at all levels use health information for local health service delivery management, planning and monitoring	VI.E.1	1.6
27		Care providers at all levels use health information for local service delivery, planning and monitoring	VI.E.2	1.7
28		HIS capacity building activities have occurred over the past year for health facility staff (data collection, self-assessment, analysis, presentation)	I.B.5	1.3
29		Percentage of health facilities submitting weekly or monthly surveillance reports on time to the district level	III.D.2.3	1.4
30		There is a systematic approach to evaluating the quality of services provided by health facilities. This includes both a) systematic standardized supervision with reporting of findings to district and national levels; and b) a health facility survey of a	III.E.1.2	0.0
31		Districts or similar administrative units compile their own monthly / quarterly, and annual summary reports, disaggregated by health facility	III.E.3.2	0.0
32		There is a system for tracking budgets and expenditures from all sources of finance (general government including social security and local government, donors, health insurance, out-of-pocket) disaggregated by sub national / district level	III.F.1.6	1.0
33		Method used to collect the most recent major data point	V.A.1.1	0.0
34		Measles coverage can be estimated from routine administrative statistics submitted by at least 90% of immunizing health facilities. These statistics are systematically reviewed at each level for completeness and consistency and inconsistencies are invest	V.B.7.1	0.0
35		There is continual demand for good quality and timely health information--for example for results/performance-based budgeting	VI.A.1	0.0
36		HIS information is widely used, by district and sub-national management teams to set resource allocation in the annual budget processes	VI.D.2	1.1
37		HIS information is used to advocate for equity and increased resources to disadvantaged groups and communities by e.g. documenting their disease burden and poor access to services	VI.D.3	1.0
38		Managers at all levels use health information for local health service delivery management, planning and monitoring	VI.E.1	1.6
39		Care providers at all levels use health information for local service delivery, planning and monitoring	VI.E.2	1.7
40		HIS capacity building activities have occurred over the past year for health facility staff (data collection, self-assessment, analysis, presentation)	I.B.5	1.3
41		For health conditions of substantial importance other than in 1.1 above (i.e. leading causes of morbidity, mortality and disability), a measurement / assessment strategy exists and is reflected in appropriate plans, tools, supporting structures, and assign	III.D.1.2	1.7
42		Percentage of health facilities submitting weekly or monthly surveillance reports on time to the district level	III.D.2.3	1.4
43		There is a systematic approach to evaluating the quality of services provided by health facilities. This includes both a) systematic standardized supervision with reporting of findings to district and national levels; and b) a health facility survey of a	III.E.1.2	0.0
44		Districts or similar administrative units compile their own monthly / quarterly, and annual summary reports, disaggregated by health facility	III.E.3.2	0.0
45		Method used to collect the most recent major data point	V.A.1.1	0.0
46		Data collection method for most recent data point	V.A.3.1	0.0
47		Methods used to collect most recent HIV/AIDS data if generalized epidemic.	V.A.4.1.1	0.0

	HIS Subsystem		Item Code	Average Score
48		Method used to collect the data for the most recent estimate	V.A.5.1	0.0
49		Methods use to collect and validate the information	V.B.6.1	0.0
50		Measles coverage can be estimated from routine administrative statistics submitted by at least 90% of immunizing health facilities. These statistics are systematically reviewed at each level for completeness and consistency and inconsistencies are invest	V.B.7.1	0.0
51		Coverage of data upon which last estimate is based -- % of sub national DOTS quarterly reports received by national TB programme in most recent year	V.B.9.5	0.0
52		Data collection methods used for most recent data point	V.C.14.1	0.0
53		There is continual demand for good quality and timely health information--for example for results/performance-based budgeting	VI.A.1	0.0
54		Managers at all levels use health information for local health service delivery management, planning and monitoring	VI.E.1	1.6
55		Care providers at all levels use health information for local service delivery, planning and monitoring	VI.E.2	1.7
56		Information on health risk factors are systematically used to advocate less-risk behaviour in the general public as well as in targeted vulnerable groups.	VI.E.3	1.8
57	#N/A	Coverage of vital registration of deaths (in percent) if VR is in place. Note: skip this item if there is no VR	III.B.1.2	0.1
58		The country has adequate capacity to (1) implement data collection, (2) process the data and (3) analyze the data from vital registration or SRS or DSS	III.B.2.1	1.3
59		Data collection method used for most recent data point	V.B.10.1	0.0

Assessment Scores by HIS Subsystems

Leadership-Governance	Financing	Health Workforce	Medical Products, Vaccines, technologies		Service Delivery		
			Medicines-Supplies	Facilities-Technology	PH-Surveillance	PHC, Districts	Hospitals
1.36	1.14	1.40	2.15	1.59	1.72	1.45	1.40

Assessment Scores by Category of Assessment

Assessment Category	Average Score
Policy & Planning	1.23
HIS Institutions, HR & Financing	1.06
HIS Infrastructure	1.53
Indicators	1.91
Census	1.04
Vital Statistics	1.86
Population Surveys	1.78
Surveillance Systems	1.50
Health Service Records	1.16
Admin Records	1.86
Data Management	0.94
Mortality	1.67
Morbidity	2.07
Health System	1.86
Risk factors	2.13

Data use: Analysis and Use	0.00
Data use: Policy and Advocacy	1.77
Data use: Planning and Priority Setting	1.73
Data use: Resource Allocation	1.20
Data use: Implementation/Action	2.24

Key questions within the HIS Assessment Framework³ so

Question Code	Items
I	POLICY AND RESOURCES
I.A.1	The country has up-to-date legislation providing the framework for health information covering the following specific components: vital registration, notifiable diseases, private sector data including social insurance, confidentiality, and fundamental principles of official statistics
I.A.5	Country Statistical Office and Ministry of Health have established coordination mechanisms (e.g. task force on health statistics; this mechanism may be multi-sectoral)
I.B.3	At sub-national levels (e.g. regions / provinces, districts) there are designated full-time health information officer positions and they are filled
I.B.5	HIS capacity building activities have occurred over the past year for health facility staff (data collection, self-assessment, analysis, presentation)
I.C.4	Are computers available at the relevant offices at national, regional, and district levels to permit rapid compilation of sub-national data?
I.C.5	Is the basic communication technology infrastructure (telephones, internet access, e-mail) in place at national, regional and district levels to ensure rapid compilation of sub-national data?
II	INDICATORS
II.A.1	National minimum core indicators have been identified for national and sub-national levels covering all categories of health indicators (determinants of health; health system inputs, outputs, outcomes; health status)
II.A.5	Reporting on the minimum set of core indicators occurs on a regular basis
III	DATA SOURCES
III.A.1.1	Mortality questions were included in the last census, by asking recent household deaths and questions for indirect estimation for child and adult mortality
III.A.2.1	The country has adequate capacity to (1) implement data collection, (2) process the data and (3) analyze the data
III.B.1.2	Coverage of civil registration (Vital events registration) of deaths (in percent)
III.B.2.1	The country has adequate capacity to (1) implement data collection, (2) process the data and (3) analyze the data from vital registration or SRS or DSS
III.C.1.1	In the past 5 years, a nationally-representative survey has measured the percentage of the relevant population receiving key maternal and child health services (family planning, antenatal care, professionally attended deliveries, immunization)
III.C.1.2	In the last five years, a nationally representative survey has provided sufficiently precise and accurate estimates of infant and under-five mortality.
III.C.2.1	The country has adequate capacity to (1) conduct household surveys (including sample design and field work), (2) process the data and (3) analyze the data

³ Proposed in the Guidance for the Health Information Systems (HIS) Strategic Planning Process: Steps, Tools and Templates for HIS Systems Design and Strategic Planning, Version 4 – February 2008, World Health Organization, Geneva, 2008.

III.C.4.1	There are meetings and a multi-year plan to coordinate the timing, key variables measured and funding of nationally representative population-based surveys which measure health indicators
III.D.1.1	For each of the key epidemic-prone diseases and diseases targeted for eradication/elimination appropriate case definitions have been established and cases can be reported on the current reporting format
III.D.1.2	For health conditions of substantial importance other than in 1.1 above (i.e. leading causes of morbidity, mortality and disability), a measurement/assessment strategy exists and is reflected in appropriate plans, tools, supporting structures, and assignments of responsibility
III.D.2.1	The country has adequate capacity to (1) diagnose and record cases of notifiable diseases, (2) report and transmit timely and complete data on these disease (3) analyze and act upon the data for outbreak response and planning of public health interventions
III.D.2.3	Percentage of health facilities submitting weekly or monthly surveillance reports on time to the district level
III.D.2.6	Individual patient records (patient charts or patient-retained "health passports") support quality and continuity of care
III.E.1.2	There is a systematic approach to evaluating the quality of services provided by health facilities. This includes both: (a) systematic standardized supervision with reporting of findings to district and national levels; and (b) a health facility survey of all facilities or of a nationally-representative sample at least once every 5 years
III.E.2.5	There are mechanisms in place at national and sub-national levels for supervision and feedback on information practices
III.E.3.2	Districts or similar administrative units compile their own monthly, and annual summary reports, disaggregated by health facility
III.E.4.1	Vertical reporting systems such as those for tuberculosis and vaccination communicate well with the general health service reporting system
III.F.1.1	There is a national roster of public and private sector health facilities. Each health facility has been assigned a unique identifier code that permits data on facilities to be merged.
III.F.1.3	There is a national human resources (HR) database that tracks the number of health professionals by major professional category working in either the public or the private sector
III.F.1.5	5 Financial records are available on general government expenditure on health, private expenditure on health (and its components) and external expenditure on health
III.F.1.6	There is a system for tracking budgets and expenditures from all sources of finance (general government including social security and local government, donors, health insurance, out-of-pocket) disaggregated by sub national / district level
III.F.1.7	Each facility is required to report at least annually on the inventory and status of equipment and physical infrastructure
III.F.1.8	Each facility is required to report at least quarterly on its stock of health commodities (drugs, vaccines, contraceptives, other supplies)
IV	DATA MANAGEMENT
IV.A.1	There is a written set of procedures for data management including data collection, storage, cleaning, quality control, analysis, and presentation for target audiences, and these are implemented throughout the country
IV.A.2	The HIS unit at national level is running an integrated "data warehouse" containing data from all data sources (both population-based and facility-based sources including all key health programmes), and has a user-friendly reporting utility accessible to various user audiences
V	INFORMATION PRODUCTS
V.A.1.1	Under-5 mortality (all causes) data collection methods used for most recent data
V.A.2.1	Adult mortality (all causes) data collection methods used for most recent data
V.A.3.1	Maternal mortality data collection methods used for most recent data

V.A.4.1	HIV prevalence data collection methods used for most recent data (1.1. if generalized epidemic, 1.2. if concentrated epidemic)
V.A.5.1.	Underweight in children (<59 months or <36 months) data collection methods used for most recent data
V.B.6.1	Outpatient attendances data collection methods used for most recent data
V.B.7.1	Measles coverage can be estimated from routine administrative statistics submitted by at least 90% of immunizing health facilities. These statistics are systematically reviewed at each level for completeness and consistency and inconsistencies are investigated and corrected. To calculate coverage, reliable estimates of population are available
V.B.9.5	TB treatment success rate under DOTS, coverage of data upon which last estimate is based -- % of sub national DOTS quarterly reports received by national TB programme in most recent year
V.B.10.1	Proportion of children (<59 months or <36 months) sleeping under insecticide-treated bednets, data collection methods used for most recent data
V.B.11.1	Private expenditure on health per capita (households' out-of-pocket, private health insurance, NGOs, corporations), data collection methods used for most recent data
V.B.13.1	Density of health workforce (total and by professional category) by 1,000 population. Routine administrative records are validated with findings from a regularly conducted health facility survey/census, labor force survey or the national population census
V.C.14.1	Smoking prevalence (15 years and older), data collection methods used for most recent data
VI	DISSEMINATION AND USE
VI.B.2.	Integrated HIS summary reports covering at least a minimum set of core indicators, including of MDGs and global health partners (GHPs) where relevant, are distributed regularly to all relevant parties
VI.C.1	Health information (population health status, health system, risk factors) is demonstrably used in the planning process, e.g. for annual integrated development plans, medium-term expenditure frameworks, long-term strategic plans, and annual health sector reviews
VI.C.2	District health workers analyze health statistics in their district, compare them with national benchmarks and act accordingly.
VI.D.2	HIS information is widely used, by district and sub-national management teams to set resource allocation in the annual budget processes
VI.D.3	HIS information is used to advocate for equity and increased resources to disadvantaged groups and communities by e.g. documenting their disease burden and poor access to services.
VI.E.1	Managers at all levels use health information for local health service delivery management, planning and monitoring
VI.E.2	Care-providers at all levels use health information for local service delivery, planning and monitoring
VI.E.3	Information on health risk factors is systematically used to advocate less risk behaviour in the general public as well as in targeted vulnerable groups.

B. Health Sector Policy and Principles of relevance to the HIS Strategy

The Health and Social Welfare Strategic Action Plan 2000-2010⁴ contains a section of the Logical Framework Matrix: To improve health management information system. This section specifies the programme goal, objective, outputs and activities, accompanied by verifiable indicators, means of verification and assumptions.

PROGRAMME GOAL

To provide timely, relevant, accurate and complete health and social welfare information on a sustainable and integrated basis

Verifiable indicators

- 1.1 Level of timeliness of health information
- 1.2 Level of accuracy of health and management information
- 1.3 Completeness of data from primary source

Means of verification

- 1.1 HMIS records
- 1.2 HMIS reports
- 1.3 HMIS records and reports

PROGRAMME OBJECTIVE:

To develop a simple, integrated and easily usable health management information system

Verifiable indicators

- 1.1 Monitoring and Evaluation programme
- 1.2 Fully operational community and health facility based information system
- 1.3 Quantitative/qualitative reports
- 1.4 Integrated surveillance system for the sector

Means of verification

- 1.1 View HPSU Reports
- 1.2 Data base; disease profiles
- 1.3 Data bases
- 1.4 HPSU reports

OUTPUTS

- 1.1 Range of data and information collected and analysed by the HPSU
- 1.2 Capacity to monitor national health programmes and community based interventions enhanced
- 1.3 Increase effectiveness of health policy implementation through integrated surveillance system

Verifiable indicators

- 1.1.1 A significant proportion of health facilities collecting routine data
- 1.1.2 All data from health interventions analysed

⁴ Government of the Kingdom of Lesotho, Ministry of Health and Social Welfare, Lesotho Health Sector Reform, Health and Social Welfare Strategic Action Plan 2000-2010, November 2003.

- 1.2.1 HPSU technical staff dedicated to HMIS
- 1.2.2 A comprehensive plan for HMIS development being implemented
- 1.2.3 Information requirements assessed and HMIS guidelines developed
- 1.2.4 Availability of national and community based information system
- 1.3.1 Effective utilisation of information for policy implementation
- 1.3.2 Effective surveillance system implemented at all levels

Means of verification

- 1.1.1 Reports on data collection and management
- 1.1.2 National epidemiological reports
- 1.2.1 HPSU reports
- 1.2.2 Planning documents; evaluation reports; monitoring
- 1.2.3 HMIS guidelines; HPSU reports
- 1.2.4 HPSU reports; District reports; facility records
- 1.3.1 Reports on evidence-based policy decisions
- 1.3.2 HPSU reports; Available sentinel sites; Field visit reports

ASSUMPTIONS

- Logistical support to collect and analyse data
- Uptake of analysed data continues to grow
- Restructured HPSU
- Sentinel surveillance sites are maintained

Activities

- 1.1 Restructure the HPSU to create an HMIS unit
- 1.2 Recruit and deploy additional technical staff
- 1.3 Develop a national strategic plan for HMIS
- 1.4 Develop, disseminate and implement guidelines on HMIS to all levels
- 1.5 Coordinate routine monitoring & evaluation of health service delivery
- 1.6 Routinely collect and analyse health data
- 1.7 Setup a national data base for the health sector
- 1.8 Disseminate information to all levels
- 1.9 Establish and ensure continuous surveillance system in health sector
- 1.10 Support integrated disease surveillance

Verifiable indicators

- Summary of project costs and implementation schedules will be developed by relevant MOHSW programmes; HAS/district management teams

Means of verification

- Means of Verification will be detailed by the relevant MOHSW programmes in collaboration with HSA or district management teams and other partners

The Health and Social Welfare Strategic Action Plan also contains another element related to the health information system:

Programme objective:

To strengthen, improve quality of, and enhance Human Resources for Health Management and Human Resources for Health Development programmes in the Lesotho health sector

Outputs:

Personnel records established, updated and accessible

Verifiable indicator:

Availability of updated and computerized relevant personnel records

Means of verification:

Observe personnel records system

The Health Planning and Statistics Department (HPSD) of the MOHSW is mandated to be the custodian of health information in the health sector. However, close links are in place with the Bureau of Statistics for the definition and analysis of indicator data. At the district, health facility and community level, NGOs, especially CHAL are extensively involved in the implementation of the health information system.

C. National Priority Health Problems and Related Services mr

D. Current Core Health Indicators

Baseline for key indicators⁵

Ref.	Indicator	2004 Baseline	2008 Targets	Progress in achieving the expected targets (2006/07)
01	Percentage of under one who are fully immunized.	68% (2004 DHS)	80%	
02	Antenatal care coverage	91% (2004 DHS)	95%	
03	Percentage of deliveries assisted by trained provider	69% (2004 DHS)	80%	
04	Percentage of population within 2 hours walking distance of a fixed health facility meeting national standards for accreditation.	1. 79.5% for any type of facility (2000 Baseline Survey) 2. 34% within one hour walk to any type of facility (2002 HHBS)	80%	
05	Percentage of GOL and CHAL health facilities staffed with standard number and type of qualified staff for the level of facility delivery	GOL Hospitals - 0% CHAL Hospitals - 0%	a) Minimum staff first referral hospitals; 1.Doctors = 4 2.prof.nurses =27 3.nurse asst.= 3 b)QEII - 1.Doctors =81, 2)prof. nurse= 341, 3)nurse asst.=39	
		GOL H/Cs = 2% CHAL H/Cs = 34	Nursing clinician + registered nurse +nurse assistant	
06	Proportion of patients attending QEII that are referred by health service provider from other facilities.	4 % (2005 Review of inpatient register)	At least 50%	
07	Percentage of budget allocated for hospital equipment and maintenance	GOL= 6.9% CHAL= 3.7%	Equipment = 10% Infrastructure = 15%	
08	Percentage of the budget allocation to district health and social welfare	Direct allocation of recurrent =16%	50% increase	

⁵ Ministry of Health and Social Welfare, Annual Joint Review Report 2007/08 FY, prepared by: Health Planning and Statistics Department, MoHSW, February 2008

	management teams			
09	Percentage of the health budget that is expended by programs (2004/05.)	Recurrent = 103%. Capital = not yet available	Recurrent = 100% for all programme Capital = over 70%	
10	Percentage of district/HSAs where quarterly M&E reports are received by the due date.	10% - Only one of the districts submitted M&E quarterly report in Q1 -2005	100%	
11 (a)	Percentage of men and women who are 15-24 years and are HIV infected	F ¹⁵⁻¹⁹ = 7.8% F ²⁰⁻²⁴ = 24.5% M ¹⁵⁻¹⁹ = 2.3% M ²⁰⁻²⁴ = 12.3%	25% reduction (2000-2007 HIV/AIDS Strategic Plan)	
11 (b)	Percentage of women who are 15-49 years and are HIV infected	Pregnant = 27% (2005 sentinel survey) Both pregnant and non pregnant = 26.5% (2004 DHS)		
12	Percentage of eligible men, women and children receiving ARV combination therapy	18% (HIV/AIDS Directorate Reports)	80%	
13	Percentage of facilities reporting one month 'stock out' for any of the drugs in the EDL for the level.	Survey protocol development and mobilization of funds ongoing	Les than 20%	
14	The ratio of orphans to non orphans who are attending school.	F= 1.0 M= 0.9 All = 1.0 (DHS)	F= 1.0 M= 1.0 All = 1.0	
15	Percentage of health facilities with functional incinerators	8% (National Health Care Waste Management. Plan (2004)	80%	

E. Current HIS Strengthening Activities, their Funding and Relevance for the HIS Strategy Design mr

The current efforts to develop the health information systems are influenced by the Lesotho Health Sector Strategic Action Plan 2000-2010⁶. This Strategic Plan set the following targets

Target

Status

By end 2004, complete the establishment of a health management information unit, with strengthened capacity to undertake identified activities for monitoring the strategic plan
By end 2004, identify key indicators for monitoring the implementation of the Strategic Plan that link the performance to the overall goal of the health and social welfare sector
By 2005, complete the establishment of the social welfare information system and integrate it into the health information system
In a period not exceeding 2005, finalize the development of all required guidelines, protocols and manuals for HMIS
Early on in the implementation process, by mid 2005, set up a surveillance system that takes into account the requirements of the central level departments

The HIS strengthening strategies formulated to reach the targets above were:

- Review, identify and design appropriate policies and instruments for data collection, processing and dissemination systems for health and social welfare;
- Define the links between the different health service delivery areas, special surveys and the MOHSW;
- Design the relevant guidelines, protocols and manuals; disseminate them to the service points for use;
- Develop capacity for HIS and disease surveillance system, a national database with an easy to follow disease classification.

⁶ Government of the Kingdom of Lesotho, Ministry of Health and Social Welfare, Lesotho Health Sector Reform, Health and Social Welfare Strategic Action Plan 2000-2010, November 2003.

F. Results of the HIS SWOT Analysis

Strengths and Weaknesses of the current HMIS⁷

Component: HMIS Resources

Strengths

- There is legislation governing the operations of HMIS, complemented by policy guidelines and medium term strategic plan.
- Current operations of the HMIS cover all public and CHAL institutions and both institutions report routinely on the core data using the national standardized collection tools.
- There is functional; central HMIS unit with sufficient capacity in core health information sciences (statistics, demography, epidemiology and planning) to meet the national health information needs.
- A complete list of health facilities (public and private) exist and are updated annually. In addition there is in place basic communication infrastructure and adequate HMIS stationery.

Weaknesses

- Lack of appropriate human and institutional capacity for HMIS at district levels.
- Lack of effective communication system and interpretative feedback from higher to lower levels of the health systems in regard to HMIS.
- None implementation of HIS strategic plan at district level;
- Slow pace in dissemination of HIS guidelines;
- Limited IT equipment maintenance support at district level

Opportunities

- The ongoing decentralization of health services provides an opportunity to improve data collection and use at the point of collection.

Recommendations

- Review the legislative framework governing HIS to facilitate inclusiveness, integration in line with the changing environment.
- Review, reorganize and strengthen integrated data collection, processing and use at district level.

⁷ Kingdom of Lesotho, Ministry of Health and Social Welfare, Assessment of the Health Management Information System, January 2007.

Component: Indicators

Strengths

- 15 National Core Indicators and 100 District Essential Indicators have been defined and performance tracked quarterly for outputs and annually for immediate results.
- The health MDGs are continuously tracked as part of the health sector monitoring processes.

Weaknesses

- No clear and explicitly strategy to measure the non health MGDs.

Opportunities

- Quarterly progress monitoring and Annual Sector Reviews is now institutionalized and included tracking progress on the health MDGs at national level.

Recommendations

- The next step is strengthen M&E processes at district levels

Component: Data Sources and Management

Strengths

- The content, periodicity, publication of last census was within the HMN Gold Standards.
- Civil Registration systems exists and captures birth and death registration data, disaggregated by sex, age, rural and urban.
- The Lesotho DHS (2004) design, methodology, data collection, data analysis and publication were conducted in line with the international standards.
- HMIS exists and has the capacity among others to provide information for planning, tracking the MDGs, service coverage as well as maintaining surveillance on important health events.

Weaknesses

- Limited capacity in the Vital Registration System as regards data collection, coverage, data dissemination, system integration and data use.
- Weak capacity in data analysis, limited data use for decision making as well as lack of use of data to guide resource allocation especially at district level;
- Paper based reporting system which affects timely reporting, accuracy and submission of health information data.
- Lack of integrated data warehouse and friendly reporting utility at central and district levels.
- Lack of capacity and systems for implementing National Health Accounts and none existence of a routine reporting system on HR and equipment.

Opportunities

- The ongoing decentralization of health services provides an opportunity to address the missing links especially at the point of data collection.

Recommendations

- Review necessary Legislation and Regulations to optimize Vital Registration, harmonizing all key players and improving public awareness on Vital Registration
- Improve medical recording and reporting using ICD10 codes through continuous training of clinicians ICD 10 and data analysis.
- Strengthen HMIS at the district level through capacity building, establishment of electronic recording and reporting systems, supply of necessary equipment, staff motivation and promote the use of information.
- Implement National Health Accounts, HRMIS, FMIS and other related information subsystems integrated within the HMIS with functional central and district based data warehouses.

Component: Information Products

Strengths

- Recent population based surveys provided accurate and reliable data on health status, health systems and services as well as OVC and risk factors indicators. In this surveys, the data collection methods, timeliness; periodicity, consistency and representative ness were in line with the HMN gold standard.
- Systems and capacity to repeat the above studies is in place.

Weaknesses

- Data on mortality and births based indicators is dependent on surveys because of a weak Vital Registration System.
- Information on GOL expenditure on health per capita is derived from administrative data rather than National Health Accounts.
- No reliable data is available on private expenditure on health

Opportunities

- Systems for strengthening data resource and data management are in place

Recommendations

- Strengthen Vital Registration
- Expedite the decentralization of data management and use to district levels through capacity building, training on data analysis and establish M&E capacities at that level.
- Implement National Health Accounts.
- Build integrated data warehouse at national and district levels
- Draw a long term plan for surveys

Component: Dissemination and use

Strengths

- Institutional demand for data has been enhanced by the ongoing processes to establish M&E capacities at all levels.
- The HMIS Central Unit provides annual report that pulls together all critical data from all subsystems.
- National under five mortality rates, maternal mortality ratio, HIV prevalence rates are well known among health focused planners and decision makers.
- All national core indicators are linked to relevant short term, medium term and long term targets.
- There is a progress increase in use of health information for planning and monitoring of service delivery at central level.

Weaknesses

- Weak capacity for data analysis at all levels
- Resource allocation to all levels is mostly historical and not necessarily informed by data.
- Limited and late publication of the health data

Opportunities

- Advancing multimedia communication technology including the newly established MOHSW website could increase advocacy and HMIS promotion.

Recommendations

- Strengthen M&E capacity at district levels
- Revitalize the Epidemiological Bulletin to support publication and promotion of HMIS
- Finalize the District Data Analysis Manual.

G. Definition of Priority HIS Subsystems and Problems so

List of Priority HIS Subsystems and Problems

Priority HIS Subsystem or Information Category (and scores)	HIS Problems
Leadership and Governance (1.36)	Lack of consolidated data impedes proper central planning and resource allocation
	Inadequate legal framework facilitating coordination and harmonization data management
	Lack of multi year plan for population based assessment
	Inadequate regulatory arrangements permitting maximizing health data recording, reporting, processing and sharing by all providers – public and private
	Non-existent National Data Standards and for periodic quality assessment and data verification
	Inadequate local and international networks on HMIS
	Inadequate partnership in health data collection, management and use
Health Workforce (1.40)	Inadequate HMIS human resource needed at central, district and facility levels
Service Delivery: PHC and District (1.72)	Inadequate data management staff at all levels, BOS and MOLGC
	Non-coordinated health service and disease data collection, capture, processing as well as analysis at district level
Weak district based Integrated Disease Surveillance and Response (IDSR)	
HIS Information Category: HIS Resources (1.06)	Inadequate information communication infrastructure for all GOL and CHAL health facilities that facilitate data capture, processing, transmission as well as reporting and health information sharing
HIS Information Category: Data Management (0.94)	Inadequate data collection and non-existent metadata dictionary for all data sources
	Weak recording, transcribing, reporting, archiving and retrieval at facility level
	Inadequate capacity to generate, process and use an Essential District Health Information Package in all 10 districts
HIS Information Category: Dissemination and Use (1.77)	Inadequate data use at the point of collection
	Inadequate knowledge management for data analysis and use at all levels
	Inadequate M&E at district levels, weak demand for data for policy implementation
	Inadequate mechanisms for effective interaction between data users and providers

Priority HIS Subsystem or Information Category (and scores)	HIS Problems
	Non-existent periodic review of operational data sources, to identify duplication, identify unmet needs and devise mechanisms for correction while controlling proliferation of data collection systems
HIS Information Category: Vital Registration (1.86)	Low coverage of vital registration due to inadequate institutional capacity procedures and resources Irregular publication of vital statistics No standardized cause of death classification at community level

**H. HIS Subsystem Objectives and Interventions
Summary of HIS Development Objectives, Interventions and Indicators**

No.	Objective	Intervention	Indicator	Baseline Value 2007	Objective Value	Date of Achieve't	Costing
HIS Subsystem: Leadership and Governance							
1	4. To review and update relevant regulatory arrangements in order to maximize health data recording, reporting, processing and sharing by all providers – public and private	a. To update Legal Framework governing HMIS data collection, processing, dissemination and use 1.1 BOS 1.2 MoLGC 1.3 MOHSW	Existence of legal framework	0	1	2010	240,000
		1.2 To enforce by authority or incentives for the Private Sector Health Providers to report on health data to DHMTs in districts of residence	% of private sector health providers reporting health data to DHMT	tdb	Increase By 50%	2012	tdb
		1.3 To adopt a National Personal Identifier Code to improve data linkage and quality. (to be developed under MCC Millennium Challenge Cooperation)	National Personal Identifier Code adopted	0	1	2013	2000000
2	2. To establish National Data Standards and institutionalize periodic quality assessment and data verification	2.1 To adopt national health Data Quality in line with WHO/HMN Gold Standards 2.2 To Develop and publish standard data dictionary for all data sets	% of Standards adopted data dictionary developed and published	?	100	2013	1000000
				0	1	2010	100000

3	3. To strengthen local and international networks on HMIS	2.3 Develop Data Quality Review Guidelines	Data Quality Review Guidelines in place	0	1	2010	150000
		3.1 To establish Information Clearinghouses for districts and Central levels,	Information Clearinghouses for districts and Central levels in place	0	11	2011	1000000
		To establish SOP for health data dissemination to facilitate information sharing at these levels	SOP for health data	Dr Rumisha to clarify			
		3.2 To promote and strengthen MOHSW membership of the HMN	Adherence to HMN standards				
		3.3 To establish and Maintain the Lesotho HMIS Stakeholders Meetings, This is an activity of 3.2					
		3.4 To use MOHSW Web Site to publicize the products of HMIS This is an activity of 3.2	To be further discussed by a subgroup				
HIS Subsystem: Health Workforce							
4	4. To provide the critical mass of HMIS human resource needed at central, district and facility levels and strengthen their skills	4.1 To identify appropriate HMIS personnel; assess training needs, evaluate training capacities and design training programme at central and DHMT levels	To further review				

6	6 To strengthen district based Integrated Disease Surveillance and Response (IDSR)	implement a standard Data Flow							
		6.1 To review and update notification instruments and strengthen utilization surveillance of priority diseases at district levels							
		6.2 To establish priority notifiable diseases database at district levels							
		6.3 To ensure periodic training for DHMT on IDS data analysis and use							
HIS Information Category: HIS Resources									
7	7 To provide information communication infrastructure for all GOL and CHAL health facilities to facilitate data capture, processing, transmission as well as reporting and health information sharing	7.1 To define and publish technical standards and define minimum ICT infrastructure package for all levels of the HMIS system 7.2 To expand connectivity, provide communication equipment and increased electronic data management to both CHAL and GOL facilities 7.3 To establish web- based support and feedback systems between providers and user of the HMIS 7.4 To develop capacity to apply GIS for map analysis and health data display at central and district levels							

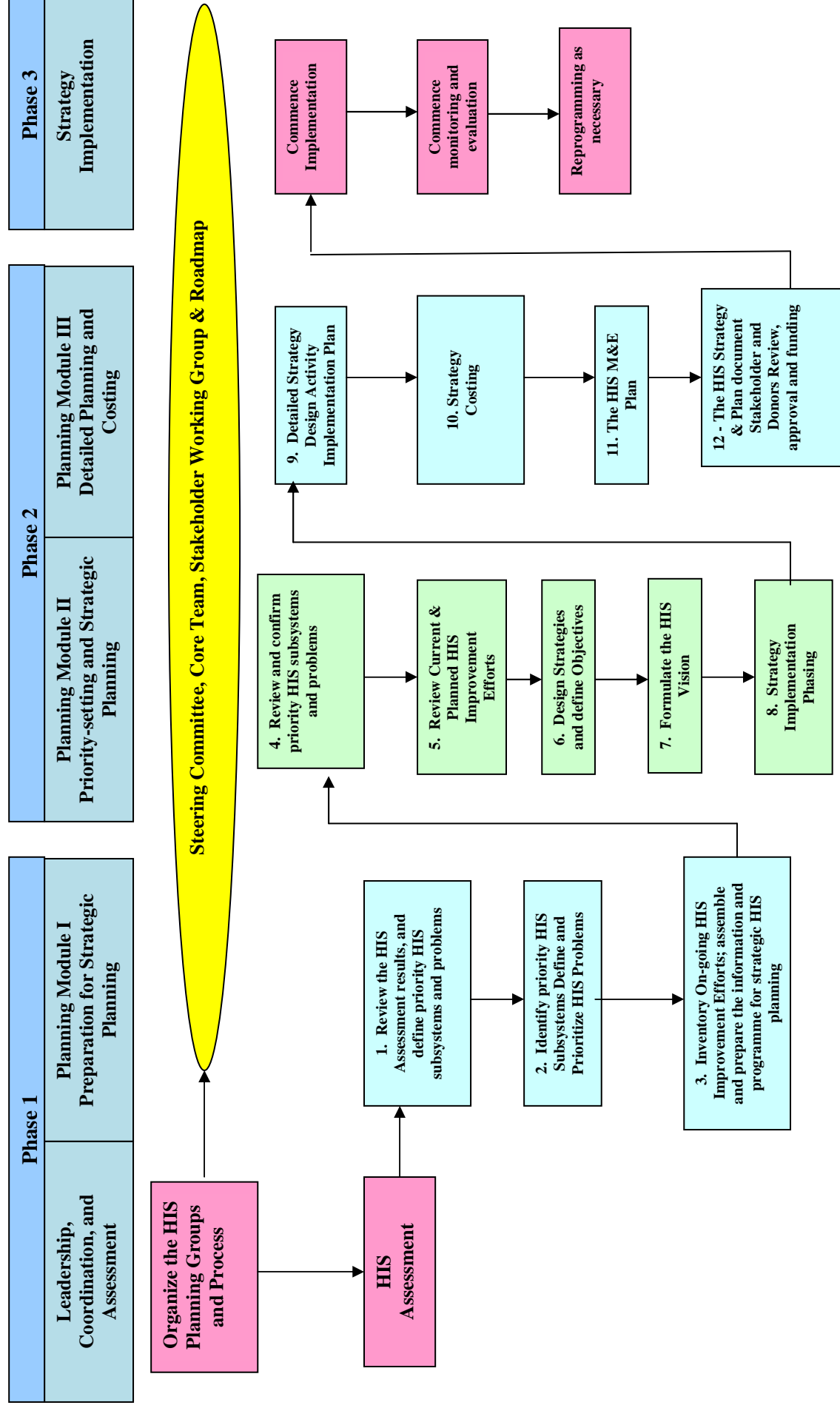
		7.5 To develop Physical Infrastructure Information Systems (PIIS)							
HIS Information Category: Data Management									
8	8 To strengthen partnership in health data collection, management and use	8.1 To define critical indicators, data sets, a home, responsibilities as well as software for a central data warehouse. This will be followed by the establishment of a robust central level data warehouse with capacity to respond to the information needs and data sharing for various stakeholders 8.2 To draw a MOU between MOHSW and all stakeholders on data collection, data flow and sharing 8.3 To define and enforce roles and Standard Operation Procedures (SOPs) for data collection and sharing between providers and users							
9	9 To strengthen data collection through development and implementation of metadata dictionary for all data sources	9.1 To develop data dictionaries and data capture guidelines for all collection and processing stations 9.2 To develop data capture and processing guidelines and implement comprehensive training on							

		11.5 To strengthen hospital medical records storage and retrieval system 11.6 To define and monitor Essential District Indicators						
		HIS Information Category: Dissemination and Use						
12	12 To improve data use at the point of collection	12.1 To produce quarterly HMIS reports by all DHMTs 12.2 To introduce Wall Charts depicting access trends or frequencies for important programmes in all Health Centers 12.3 To provide health data feedbacks to all health centers on quarterly basis. 12.4 To introduce mortality assessment meetings in all hospitals						
13	13 To enhance knowledge management through strengthening capacity for data analysis and use at all levels	13.1 To develop National Health Data Analysis and Interpretation Modules as a measure of minimum acceptable HMIS skills for district managers 13.2 To introduce data analysis in pre-service and in services courses for health workers 13.3 To introduce performance based funds disbursement and use health data as a basis of resource allocation						
14	14 To promote and strengthen M&E at	14.1 To develop district strategic plans in line with						

15	district levels so that it drives the demand for data and link data to policy implementation	national objectives 14.2 To identify Essential District Indicators and use them for performance monitoring 14.3 To conduct comprehensive training on M&E at district levels 14.4. To support all DHMTs to conduct local monitoring of their Operational Plan (OP) and organize local reflection meetings					
15	15 To establish and promote mechanisms for effective interaction between data users and providers	15.1 To conduct and institutionalize Annual National HMIS Dissemination Conference 15.2 To establish National and District HMIS coordinating Committees 15.3 To produce and disseminate Epidemiological Profiles and/or MOHSW Annual Reports					
16	16 To institutionalize periodic review of operational data sources, to identify duplication, identify unmet needs and devise mechanisms for correction while controlling proliferation of data collection systems	16.1 Through customer surveys, assess the current data needs, to secure agreements on integration and expansion of data elements to include identified gaps 16.2 To design and implement Social welfare, Environmental Health, Medical Equipment, HR and Physical Infrastructure					

		Information Systems								
		16.3 To implement the Second Demographic and Health Survey (DHS)								
		16.4 To design a system and Implement National Health Accounts								
		HIS Information Category: Vital Registration								
17	17 To participate in improving Vital Registration coverage and capacity building for the subsystem	17.1 To work with other stakeholders to ensure that vital events are registered and reported timely and in a manner that supports data quality and integrity								
		17.2 To develop a set of agreements on collection, processing analysis and publication between Vital Statistics agencies that enhances timely and complete registration of vital events								
		17.3 To provide necessary ICT infrastructure to enable vital statistics interoperability								
		17.4 To establish a system of linking the vital event information to other health care information sets for benchmark performance and people's health								

Annex A2 - The HIS Strategy Design and Implementation Planning Process



Green steps are carried out by the SWG, blue steps by the CT or small working groups

Annex A3

Participants of a Core Team meeting, 18-19 March 2008

NAME	ORGANIZATION
1. M. Ramoseme	MOHSW
2. M. Likoti	MOLGC
3. M. Mohale	CHAL
4. D. Rumisha	MOHSW
5. T. Ramatlapeng	MOHSW
6. J. Nkonyana	MOHSW
7. S. Orzeszyna	WB
8. N. Makara-Nonyana	MOHSW
9. M. Khoeli	BOS

Annex A4

Participants of a Stakeholder Working Group meeting, 27 March 2008

NAME	ORGANIZATION
1. N. Makara-Nonyana	MOHSW
2. D.W. Rumisha	MOHSW
3. Stanislaw Orzeszyna	WB
4. K. Ntoi	MOHSW
5. Eline Talsma	UNICEF
6. Palesa Nthinya-Ntene	UNICEF
7. M. Ramoseme	MOHSW
8. Maneo Liphapang	MOHSW-HR
9. Macheli Mohapi	MOHSW-HR
10. M. Likoti	MOLGC
11. D.M.Mothabeng	LAB.MOHSW
12. Mannuku Mathe	MOHSW-FHD
13. John Nkonyana	MOHSW
14. M. Mohale	CHAL
15. S. Makeka	UNICEF

Annex B1 Schedule of work - Health Information System (HIS) Strategic Planning Process in Lesotho, March 2008

	Mon, 17 March	Tue, 18 March	Wed, 19 March	Thu, 20 March	Fri, 21 March	Sat, 22	Sun, 23
AM	Session 1 – 2 Meeting in the MoH, CSO, other stakeholders Background of the HIS Strategic Planning Process Fine tuning of objectives and logistics	Session 3 CT Meeting (CT 1) Review of HIS assessment results Priority HIS Subsystems and Problems	Session 5 CT Meeting (CT 3) Strategy Implementation Phasing	Session 7 CT Meeting (CT 5) Current and planned HIS strengthening efforts	Session 9 CT Meeting (CT 7) Roadmap for HIS Strengthening Priority health problems		
PM		Session 4 CT Meeting (CT 2) Proposed HIS objectives and interventions	Session 6 CT Meeting (CT 4) HIS strategy costing	Session 8 CT Meeting (CT 6) Drafting HIS Strategic Plan	Session 10 CT Meeting (CT 8) Drafting HIS Strategic Plan		
	Mon, 24 March	Tue, 25 March	Wed, 26 March	Thu, 27 March	Fri, 28 March	Sat, 29	Sun, 30
AM	Session 11 Staff work Detailed HIS strategy planning Implementation phasing Intervention costing	Session 13 CT Meeting (CT 9) HIS funding, Global Fund HIS development funding proposal	Session 15 Preparing materials and documents for the SWG meeting	Session 17-18 SWG Meeting Background of Strategic Planning Review of HIS assessment results Priority HIS Subsystems and Problems	Session 19 Meeting in the MoH, CSO, other stakeholders		
PM		Session 14CT CT Meeting (CT 10) HIS funding, Global Fund HIS development funding proposal	Session 16 Preparing materials and documents for the SWG meeting	Current and planned HIS strengthening efforts Proposed HIS objectives and interventions Interventions Implementation Phasing Presentation of Strategic Plan Highlights Next steps	Session 20 Summing up of HIS Strategic Planning process Next steps Report preparation		

CT – Core Team

SWG – Stakeholder Working Group

Annex B.2

Agenda of the Stakeholder Working Group meeting

**Ministry of Health and Social Welfare
Health Planning and Statistics Department**

**Health Information System Stakeholder Working Group Meeting
Maseru, 27 March 2008**

Draft Agenda

Programme

8.30-9.00	Registration
9.00-9.30	Opening, introductions
9.30-10.00	Background of Strategic Planning
10.00-10.30	Review of HIS assessment results
10.30-10.45	Coffee break
10.45-11.15	Priority HIS Subsystems and Problems
11.15-11.30	Current and planned HIS strengthening efforts
11.30-12.00	Proposed HIS objectives and interventions
12.00-12.30	Discussion
12.30-13.00	Interventions Implementation Phasing
13.00-14.00	Lunch
14.00-15.00	Presentation of Strategic Plan Highlights
15.00-15.30	Discussion, Next steps
15.30-15.45	Tea break
15.45-16.15	Discussion, Next steps
16.15-16.30	Closure

Annex C

References – Click on the hyperlink to access the document

1 General principles

Health information systems: the foundations of public health

<http://www.who.int/bulletin/volumes/83/8/578.pdf><http://www.who.int/bulletin/volumes/83/8/578.pdf>

Information to improve decision making for health

<http://files.dcp2.org/pdf/DCP/DCP54.pdf>

World Health Statistics 2007: A guide to statistical information at WHO

<http://www.who.int/whosis/en/index.html>

Guide to the General Data Dissemination System

<http://dsbb.imf.org/vgn/images/pdfs/gddsguide.pdf>

Developing health information systems in developing countries

UN Fundamental Principles of Official Statistics

<http://unstats.un.org/unsd/methods/statorg/FP-English.htm>

Building health information systems in the context of national strategies for the development of statistics

<http://www.who.int/bulletin/volumes/83/8/564.pdf>

1.1 Health Metrics Network

HMN Framework and Standards for the Development of Country Health Information Systems

http://www.who.int/healthmetrics/documents/hmn_framework200609.pdf

HMN Framework and Standards, Second Edition

HMN Strategy and plan of operations for 2007-2008

http://www.who.int/healthmetrics/governance/HMN_network_strategy.pdf

HMN Strengthening Country Health Information Systems: Assessment and Monitoring Tool guide, Version 2.00, 29 July 2007

http://www.who.int/healthmetrics/tools/hmn_assessment_tool_guide_ver2.pdfhttp://www.who.int/healthmetrics/tools/hmn_assessment_tool_guide_ver2.pdf

HMN Assessment Tool (xls) version 2

http://www.who.int/healthmetrics/tools/hmn_assessment_tool_ver2.xls

HMN Assessment Group Builder

http://www.who.int/healthmetrics/documents/hmn_assessment_groupbuilder_1_5.xls

HMN Roundtable Consultation on Standards and Challenges in Health Information Systems

<http://www.who.int/healthmetrics/documents/hmnroundtable01.pdf>

HMN Biennial Report 2005/2006

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1.2 General Data Dissemination System

What is the General Data Dissemination System?

<http://dsbb.imf.org/Applications/web/gdds/gddswhatgdds/>

The data dimension of the GDDS – A. Comprehensive Frameworks

<http://dsbb.imf.org/Applications/web/gdds/gddstablea/>

The data dimension of the GDDS – B. Data Categories and Indicators

<http://dsbb.imf.org/Applications/web/gdds/gddstableb/>

1.3 Health System Metrics

Health System Metrics, Report, Glion, 2006

http://www.who.int/healthinfo/health_system_metrics_glion_report.pdf

Monitoring Health System Performance

<http://www.who.int/healthmetrics/documents/balabanovahspacountries.ppt>

Policy and Institutional Assessment Indicator

<http://www.who.int/healthmetrics/documents/boscpia.ppt>

1.4 Data Quality

Data quality assessment framework – Generic framework

http://dsbb.imf.org/vgn/images/pdfs/dqrs_Genframework.pdf

IMF Approaches to Data Quality

<http://dsbb.imf.org/Applications/web/dqrs/dqrsapproaches/>

IMF DQAF generic framework – worksheet

http://dsbb.imf.org/vgn/images/pdfs/dqrs_factsheet.pdf

OECD Health Care Quality Indicators Project: Conceptual Framework Paper

<http://www.oecd.org/dataoecd/1/36/36262363.pdf>

OECD Health Care Quality Indicators Project: Initial Indicators Report

<http://www.oecd.org/dataoecd/1/34/36262514.pdf>

1.4.1 The General Data Dissemination System framework (GDDS)

Botswana: GDDS Table C. Data integrity and access by the public

<http://dsbb.imf.org/Applications/web/gdds/gddscountrycategorydiapreport/?strcode=BWA&strcat=185>

1.4.2 Data quality assessment framework (DQAF)

Fundamental principles of official statistics (UN)

<http://unstats.un.org/unsd/dnss/fundprinciples.aspx>

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eHealth – Health Information Systems – IST (Information Society Technologies in Africa) 2008, Call for papers, 14-16 May 2008

http://www.ist-africa.org/Conference2008/files/ISTAfrica2008_CallforPapers.pdf#

1.5 Community based health information systems

Community based health information systems – RHINO Forum 2007

1.6 Assessing Health Information Systems

HMN Assessment Tool Guide, ver. 2.0

http://www.who.int/healthmetrics/tools/hmn_assessment_tool_guide_ver2.pdf

HMN Assessment Tool (Excel file) version 2.0

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HMN Assessment Groupbuilder

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Monitoring Health Information Systems

<http://www.who.int/healthmetrics/documents/stansfieldhis.ppt>

Measuring availability and accessibility coverage. Results of the GIS capacity and data availability analysis

http://www.gsdi.org/SDIA/docs2007/apr07links/GIS_Malawi_final.pdf

1.6.1 Census

UN Census website

<http://unstats.un.org/unsd/demographic/sources/cwp2010/docs.htm>

Handbook on Census Management for Population and Housing Censuses

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UN Principles and Recommendations for Population and Housing Censuses

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Every death counts: measurement of maternal mortality via a census

<http://www.cpc.unc.edu/measure/publications/pdf/ja-01-19.pdf>

Measuring Maternal Mortality from a Census: Guidelines for Potential Users

<http://www.cpc.unc.edu/measure/publications/pdf/ms-01-04.pdf>

1.6.2 Vital registration

UN Principles and Recommendations for a Vital Statistics System

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Sample registration of vital events with verbal autopsy

<http://www.who.int/bulletin/volumes/83/8/611.pdf>

Sample Vital Registration with Verbal Autopsy in Tanzania

<http://www.cpc.unc.edu/measure/communications/monitor/Monitor.No2.Fall2006.pdf>

Demographic Surveillance System (DSS) in Tanzania

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Improving fertility, mortality and disability statistics in Africa

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Coverage of vital registration of deaths

<http://www.who.int/whosis/whostat2006CoverageOfVitalRegistrationOfDeaths.pdf>

Evaluation of a village-informant driven demographic surveillance system

<http://www.demographic-research.org/Volumes/Vol16/8/16-8.pdf>

Demographic surveillance system, Vietnam

http://www.indepth-network.net/dss_site_profiles/filabavidss.pdf

1.6.3 Surveys

HMN Health Surveys Meeting, Calverton, 2007 - Report

http://www.who.int/healthmetrics/library/hmn_healthsurveysmeeting.pdf

HMN Health Surveys Meeting, Calverton, 2007 – Objectives

http://www.who.int/healthmetrics/library/Boerma_Objectives_Session_1.ppt

World Health Surveys

<http://www.who.int/healthinfo/survey/hspa58.pdf>

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A comparative study of survey instruments

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CDC Household Survey Activities

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Multiple Indicator Cluster Surveys

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<http://www.worldbank.org/lsms/>

International Household Survey Network (IHSN)
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Priority survey in Zambia, 1991-98
<http://www1.worldbank.org/prem/poverty/learning/diagnos/priority.pdf>

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Demographic and Health Surveys
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Field Staff Training in the DHS
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Health facility censuses and surveys – Tanzania

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Routine Health Information Systems Network (RHINO)
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1.6.4.1 Facility Based Information

Facility Censuses and Surveys
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Routine Health Information System concepts and methods – MEASURE Evaluation

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1.7 Health Indicators

Indicator Definitions and Metadata

<http://www.who.int/whosis/indicators/2007compendium/en/index.html>

Introduction to Indicators (MEASURE Evaluation and UNAIDS)

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Ten Statistical Highlights in Global Public Health, 2007

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UNAIDS guidelines on construction of core indicators

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1.7.1 Examples of indicators

Millennium Development Goals Indicators

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The millennium development goals for health: rising to the challenges

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MDG Indicators - Details(definitions, calculation, sources)

http://www.cstbkk.org/Goals__Details.html#186

Maternal health indicators

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The Millennium Development Goals in Africa

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2 Strengthening Health Information Systems

2.1 General principles

World Health Assembly 2007: Strengthening of health information systems
http://www.who.int/gb/ebwha/pdf_files/WHA60/A60_R27-en.pdf

A guide to designing a national strategy for the development of statistics (NSDS), PARIS21, 2004
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http://www.wpro.who.int/NR/rdonlyres/5469C623-B188-4647-ABEC-A10127A76E78/0/Guidelines_Dev_Health_Management_Info_Systems.pdf

Health statistics now: are we making the right investments?
http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6T1B-4N5F7JV-18&_user=10&_coverDate=03%2F09%2F2007&_rdoc=1&_fmt=summary&_orig=browse&_cdi=4886&_sort=d&_docanchor=&view=c&_ct=1&_acct=C000050221&_version=1&_urlVersion=0&_userid=10&md5=3a9b5bebafa97ddb407b8ea01dfc4a9a

Health information system strategic planning
http://www.wpro.who.int/NR/rdonlyres/19A52576-E005-4476-91DA-36A28DAE28E3/0/Informal_Consultation_on_HIS_Strategic_Plan_for_the_WPR.pdf

Developing health management information systems: a practical guide for developing countries
http://www.wpro.who.int/NR/rdonlyres/3A34C50D-C035-425A-8155-65E8AD3CB906/0/Health_manage.pdf

Developing integrated national health information systems
<http://www.wpro.who.int/NR/rdonlyres/A3B3736F-778D-4E41-8579-9FB12CCFCC8C/0/MeetingReport.pdf>

Strengthening Health Information System for Maternal and Child Care Services, 2004
http://www.wpro.who.int/NR/rdonlyres/7F4A401F-3924-4B8D-911D-3398F77A477E/0/strengthening_mch_his_pic.pdf

Health Information, Research and Knowledge Management, 2006

http://www.wpro.who.int/NR/rdonlyres/1221E571-9701-4E10-BA9D-EEFFC2F52EDF/0/Newsletter1_rev.pdf

2.2 General country data

Lesotho Logbook

<http://www.who.int/healthmetrics/tools/logbook/en/logbook.cfm?ISO3=LSO&tabselected=0>

Lesotho Health Management Information System Guidelines Policy

Lesotho Bureau of Statistics

<http://www.bos.gov.ls/>

2.3 HIS Software

Health information systems and open source software development: need for cross-country collaboration in Africa – experiences from the HISP/BEANISH network

http://www.ist-africa.org/Conference2007/outbox/ISTAfrica_Paper_ref_81_doc_1671.pdf

Software based systems for ART program and patient monitoring

[https://www.who.int/3by5/publications/en/7Summary%20of%20Software%20Based%20Systems-%20Mark%20Spohr%20\(JSI-USAID\).ppt](https://www.who.int/3by5/publications/en/7Summary%20of%20Software%20Based%20Systems-%20Mark%20Spohr%20(JSI-USAID).ppt)

Minimum Dataset for Care of Patients (Abstract)

<http://www.jamia.org/cgi/content/abstract/M2005v1>

ART records and EMR systems in Africa

http://www.who.int/kms/initiatives/HL7_ART_meeting_report_FINAL.pdf

3 Useful sites

World Bank

International Monetary Fund

World Health Organization

Health Metrics Network

<http://www.who.int/healthmetrics/en/>

PARIS21 (**P**artnership **i**n statistics for development in the **21st** century)

<http://www.paris21.org/>

WHO Global InfoBase Online Glossary

http://www.who.int/ncd_surveillance/infobase/web/InfoBaseCommon/Help/HelpList.aspx?Type_Code=hp.tc.001

MEASURE Evaluation

<http://www.cpc.unc.edu/measure/leadership/pepfar>

Routine Health Information Network (RHINO)

<http://www.rhinonet.org/>