

MINISTRY OF HEALTH

# **Five-Year Strategic Plan (2011-2015)**

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## **HEALTH INFORMATION SYSTEM**

### **MYANMAR**

Department of Health Planning



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# Acknowledgement

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Finally, we would like to thank the Health Metrics Network, Geneva for providing funds as well as technical assistance provided through standard guidelines and tools for assessment of existing Health Information System and development of Health Information System Strategic Plan.

# Executive Summary

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The Health Information System Strategic Plan (2011-2015) is the first strategic plan for Health Information System in Myanmar. Before that all activities conducted for strengthening health information system is through WHO biannual workplan or annual workplan supported by UNICEF or UNFPA on a yearly basis. This Health Information System Strategic Plan (2011-2015) is based on comprehensive assessment of existing health information system according to guideline provided by the Health Metrics Network and on various needs by different users. The HIS strategic plan is the product of all guidance from the Minister, Deputy Ministers for Ministry of Health, Senior Officials from various Departments under the Ministry of Health, Senior Officials from State/Divisional Health Departments, Officials from Central Statistical Organization and Department of Population, Officials from UN Agencies and Non Governmental Organizations.

The assessment of current health information system was conducted in 2006 and reviewed again in 2009. The discussions on development of Health Information System Strategic Plan (2011-2015) began in 2009 and finalized in 2010. World Health Organization provided technical support and coordinated between Health Metrics Network and the country. Funding and technical assistance was provided by Health Metrics Network.

The vision of Health Information System Strategic Plan is “a simple, effective and systematic health information system established at all levels of health care delivery for the strengthening of health system”. To improve the availability, accessibility and utilization of quality health information is general objective of drawing HIS strategic plan.

Specific objectives are as follow:

- To enhance the HIS commitment, coordination and HIS resources
- To improve the quality of the hospital data recording and reporting
- To improve the quality of the public health data recording and reporting
- To develop a reporting system for private health sector
- To improve the coverage and quality of vital registration system
- To improve surveillance system on disease and health
- To encourage population based survey
- To improve data management, and data sharing encompassing IT development
- To promote utilization of health information in decision making process

Specific performance objectives are developed under each of specific objectives.

**To enhance the HIS commitment, coordination and HIS resources**

- To enhance Commitment and co-ordination for HIS
- To expand and strengthen the HIS staff
- To ensure adequate financial management support
- To improve working environment for health information management

**To improve the quality of the hospital data recording and reporting**

- To standardize the medical record forms for both public and private hospitals
- To develop guidelines for medical record documentation and ICD 10
- To improve the quality of service records and reports

**To improve the quality of the public health data recording and reporting**

- To develop national core indicators on health
- To update, produce and disseminate minimum essential data set for public health information periodically
- To strengthen supervision and monitoring

**To develop a reporting system for private health sector**

- To ensure availability of health information from private hospitals

**To improve the coverage and quality of vital registration system**

- To increase coverage of vital registration system
- To improve the quality of collecting reporting and recording vital events

**To improve surveillance system on disease and health**

- To improve disease and health surveillance system

**To encourage population based survey**

- To improve availability and quality of population based survey

**To improve data management, and data sharing encompassing IT development**

- To expend appropriate application of information and communication technology in current health information system
- To strengthen data sharing and analysis at all levels

**To promote utilization of health information in decision making process**

To create the culture of evidence based decision making

# Introduction

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Ministry of Health has adopted the following two objectives: “Enabling every citizen to attain full life expectancy and enjoy longevity of life” and “ensuring that every citizen is free from diseases”. In order to fulfill these objectives the ministry identified three strategies which are “wide spread dissemination of health education and information to reach rural areas”, “enhancing diseases prevention activities” and “providing effective treatment for prevailing diseases to upgrade health status of entire nation”.

Health Management Information System is one of twelve programs under the National Health Plan (2006–2011). Hospital information, public health information, human resource information, logistic information and information communication technology development are the projects under this HMIS program.

Based on the guidelines provided by the Health Metrics Network, systematic assessment of current health information system was done in 2006 and reviewed again in 2009. HIS strategic plan was developed based on findings of HIS assessments with technical and financial assistances from WHO and Health Metrics Network from Geneva.

## *Myanmar Health Care Delivery System*

Ministry of Health is the major provider of comprehensive health care. Department of Health, one of 7 departments under the Ministry of Health, plays a major role in providing comprehensive health care throughout the country including remote and hard to reach border areas. Some ministries such as Ministries of Defense, Railways, Mines, Industry I, Industry II, Energy, Home and Transport are also providing health care, mainly curative, for their employees and their families. Ministry of Labour has set up two general hospitals, one in Yangon and the other in Mandalay, and one TB hospital in Hlaingtharyar (Yangon) to render services to those entitled under the social security act (1956). Ministry of Industry (1) is running a Myanmar Pharmaceutical Factory and producing medicines and therapeutic agents to meet the domestic needs.

The public sector takes care in both financing and health care provision and at the same time private sector is also growing. General Practitioners' Section of the Myanmar

Medical Association with its branches in townships provide the private practitioners the opportunities to update and exchange their knowledge and experiences by holding seminars, talks and symposia on currently emerging issues and updated diagnostic and therapeutic measures. The Medical Association and its branches also provide a link between them and their counterparts in public sector so that private practitioners can also participate in public health care activities.

In line with the National Health Policy NGOs such as Myanmar Maternal and Child Welfare Association, Myanmar Red Cross Society are also taking some share of service provision and their roles are also becoming important as the needs for collaboration in health become more prominent. Sectoral collaboration and community participation is strong in Myanmar health system thanks to the establishment of the National Health Committee in 1989. Recognizing the growing importance of the needs to involve all relevant sectors at all administrative levels and to mobilize the community more effectively in health activities health committees have been established in various administrative levels down to the wards and village tracts. These committees at each level are headed by the chairman or responsible person of the organ of power concern and include heads of related government departments and representatives from the social organizations as members. Heads of the health departments are designated as secretaries of the committees.

### *Brief History of Health Information System in Myanmar*

Health information system started in 1978, in contemporary with the first People's Health Plan (1978-1982). Initially main source of data was hospital records and later public health care services and administrative records are used as data sources. In July 1995, integrated health management information system was established with new concept of minimum essential data set with the aim to reduce the workload of basic health staff. The National Health Committee is a multisectoral policy making body and it gives the guidance and has the responsibility of coordination among health and health related sectors for health information management. Central Statistical Organization has the responsibility for generating, analysis and dissemination of statistics for the country according to central statistical authority act of 1952. According to the act, there are regulations and procedures for collection, analysis and dissemination of data related to vital events and notifying diseases and social insurance.

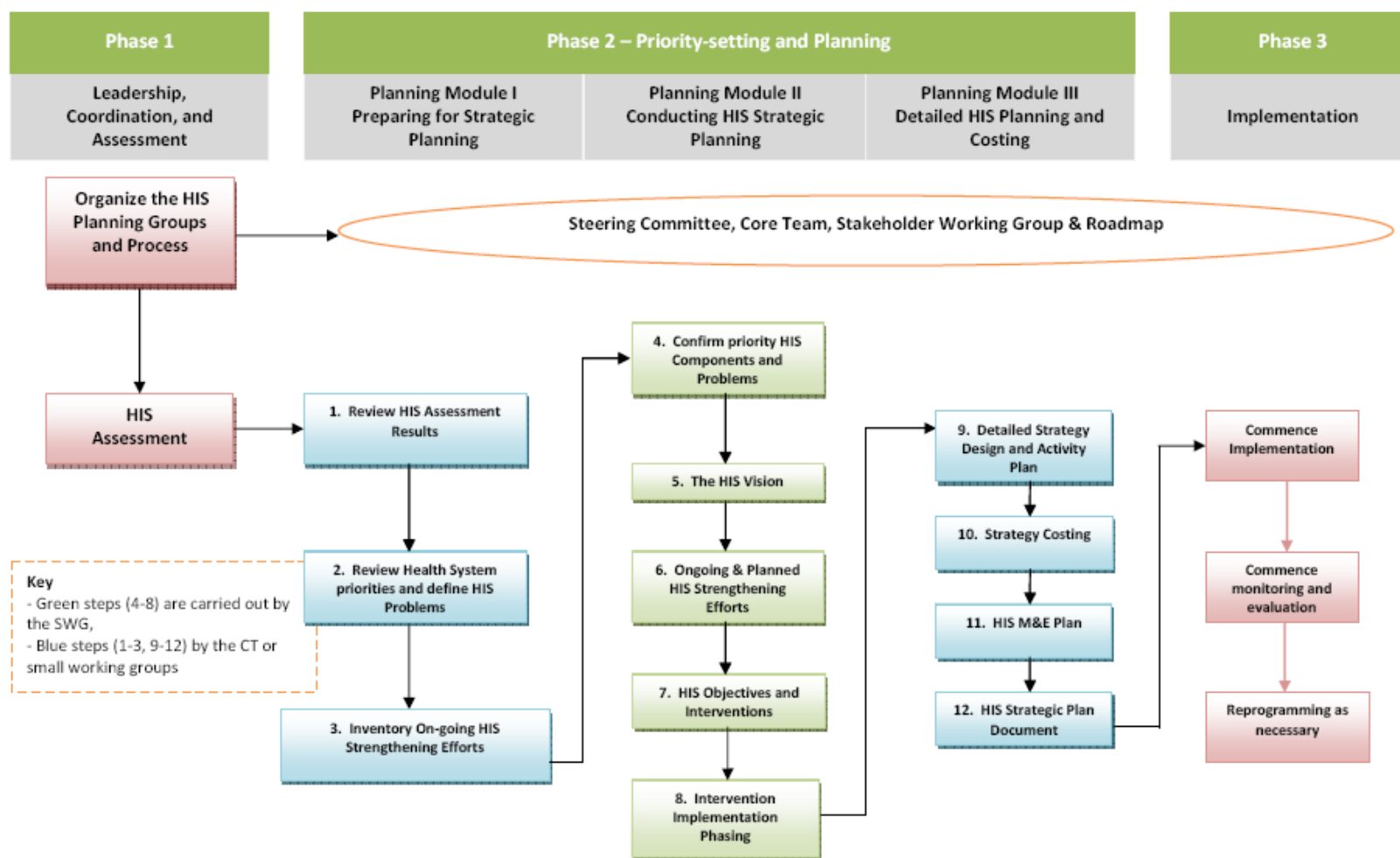


In 2003, workshop on review of existing public health data set was held. After that a number of meetings were conducted during 2004 and new data set was revised and collected in 2005. It includes mainly data on health services. Data on infrastructure, manpower and voluntary contribution are also collected through routine public health information system. Hospital information is collected on monthly basis from all public hospitals and a major gap in existing health information system is lack of private sector information. Central Epidemiological Unit under Department of Health takes care on disease surveillance system. Health researches are under taken by three Medical Research Departments as well as by remaining departments based on their areas of interest.

Two interdepartmental meetings for planning HIS assessment were conducted on 5<sup>th</sup> and 27<sup>th</sup> September 2006. Various departments under the Ministry of Health, Central statistical Organization, Ministry of National Planning and Economic Development attended these meetings. The workshop on HIS assessment was done on 26-27 October 2006. Then consultative meeting for workshop findings was held on 15 February 2007. Another two consensus meetings were conducted on 28 March and 10 April 2007.

Core group for developing Myanmar Health Information System Strategic Plan was established on 11 September 2009. Preliminary meetings to develop Myanmar Health Information System Strategic Plan have been carried out. Three series of meetings were conducted to revisit new version assessment tool and all agreed the previous results and identified vision, goals and objectives for future health information system. A national level workshop was carried out on 25-26 November 2009 for the development of strategies and activities. Decision makers, state/divisional health directors and representatives from UN agencies and INGOs participated in this workshop. Consensus on objectives, strategy and activities described in Myanmar Health Information System (2011 – 2015) was received among stakeholders on 14<sup>th</sup> July 2010.

# The HIS Strategy Design and Implementation Planning Process



# HIS assessment in Myanmar

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The results from assessment of six components of HIS are as follows:

## SUMMARY SCORES

| Category                                  | Score       |
|-------------------------------------------|-------------|
| <b>Resources</b>                          | <b>52 %</b> |
| Policy and Planning                       | 51 %        |
| Institutions, Human Resources & financing | 51 %        |
| Infrastructure                            | 54 %        |
| <b>Indicators</b>                         | <b>66 %</b> |
| Data Sources                              | 49 %        |
| Census                                    | 15 %        |
| Vital Statistics                          | 68 %        |
| Population based surveys                  | 67 %        |
| Health & disease records                  | 46 %        |
| Health service records                    | 52 %        |
| Administrative records                    | 44 %        |
| Data Management                           | 45 %        |
| Information Products                      | 64 %        |
| Health Status                             | 67 %        |
| Mortality                                 | 68 %        |
| Morbidity                                 | 68 %        |
| Health System                             | 60 %        |
| Risk factors                              | 70 %        |
| Data collection method                    | 71 %        |
| Timeliness                                | 66 %        |
| Periodicity                               | 61 %        |
| Consistency                               | 59 %        |
| Representativeness                        | 67 %        |
| Disaggregation                            | 59 %        |
| Estimation method / transparency          | 64 %        |
| Dissemination & use                       | 52 %        |
| Analysis and use of information           | 57 %        |
| Policy and advocacy                       | 61 %        |
| Planning and Priority Setting             | 53 %        |
| Resource allocation                       | 35 %        |
| Implementation / action                   | 53 %        |

### RESULTS OF RESOURCES

| Summary                                         | Result                   |
|-------------------------------------------------|--------------------------|
| Policy and Planning                             | Present but not adequate |
| HIS institutions, human resources and financing | Present but not adequate |
| HIS Infrastructure                              | Present but not adequate |
| Overall                                         | Present but not adequate |

### RESULTS OF INDICATORS

| Summary    | Result   |
|------------|----------|
| Indicators | Adequate |

### RESULTS OF DATA SOURCES

| Data Source                                                  | Contents                 | Capacity & Practices     | Dissemination            | Integration and use      | Total                    |
|--------------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Census                                                       | Not functional           | Not adequate             | Not functional           | Not adequate             | Not functional           |
| Vital statistics                                             | Adequate                 | Not adequate             | Highly adequate          | Adequate                 | Adequate                 |
| Population-based surveys                                     | Highly adequate          | Highly adequate          | Not adequate             | Present but not adequate | Adequate                 |
| Health and disease records (incl. disease surveillance sys.) | Present but not adequate | Present but not adequate | Not adequate             | Present but not adequate | Present but not adequate |
| Health service records                                       | Not adequate             | Present but not adequate | Adequate                 | Adequate                 | Present but not adequate |
| Administrative records                                       | Present but not adequate | Present but not adequate | Present but not adequate | Not adequate             | Present but not adequate |

## RESULTS OF DATA MANAGEMENT

| Summary         | Result                   |
|-----------------|--------------------------|
| Data management | Present but not adequate |

## RESULTS OF INFORMATION PRODUCTS

| <i>Marking Indicators</i><br><br><i>Elements for assessing selected indicators</i> | Health status            |                          |                 | Health system indicators | Risk factors indicators  | Overall health indicators quality |
|------------------------------------------------------------------------------------|--------------------------|--------------------------|-----------------|--------------------------|--------------------------|-----------------------------------|
|                                                                                    | <i>Mortality</i>         | <i>Morbidity</i>         | <i>Overall</i>  |                          |                          |                                   |
| Data collection method                                                             | Adequate                 | Adequate                 | Adequate        | Adequate                 | Highly adequate          | Adequate                          |
| Timeliness                                                                         | Highly adequate          | Highly adequate          | Highly adequate | Present but not adequate | Adequate                 | Adequate                          |
| Periodicity                                                                        | Adequate                 | Adequate                 | Adequate        | Present but not adequate | Present but not adequate | Adequate                          |
| Consistency/ completeness                                                          | Present but not adequate | Adequate                 | Adequate        | Adequate                 | Present but not adequate | Present but not adequate          |
| Representativeness/ appropriateness                                                | Adequate                 | Present but not adequate | Adequate        | Adequate                 | Adequate                 | Adequate                          |
| Disaggregation                                                                     | Adequate                 | Adequate                 | Adequate        | Present but not adequate | Highly adequate          | Present but not adequate          |
| Estimation method/ transparency                                                    | Adequate                 |                          | Adequate        | Adequate                 |                          | Adequate                          |
| <b>Overall assessment of results</b>                                               | Adequate                 | Adequate                 | Adequate        | Adequate                 | Adequate                 | Adequate                          |

### RESULTS OF DISSEMINATION AND USE

| Summary                         | Result                   |
|---------------------------------|--------------------------|
| Analysis and Use of Information | Present but not adequate |
| Policy and Advocacy             | Adequate                 |
| Planning & Priority Setting     | Present but not adequate |
| Resource allocation             | Not adequate             |
| Implementation / action         | Present but not adequate |
| Overall                         | Present but not adequate |

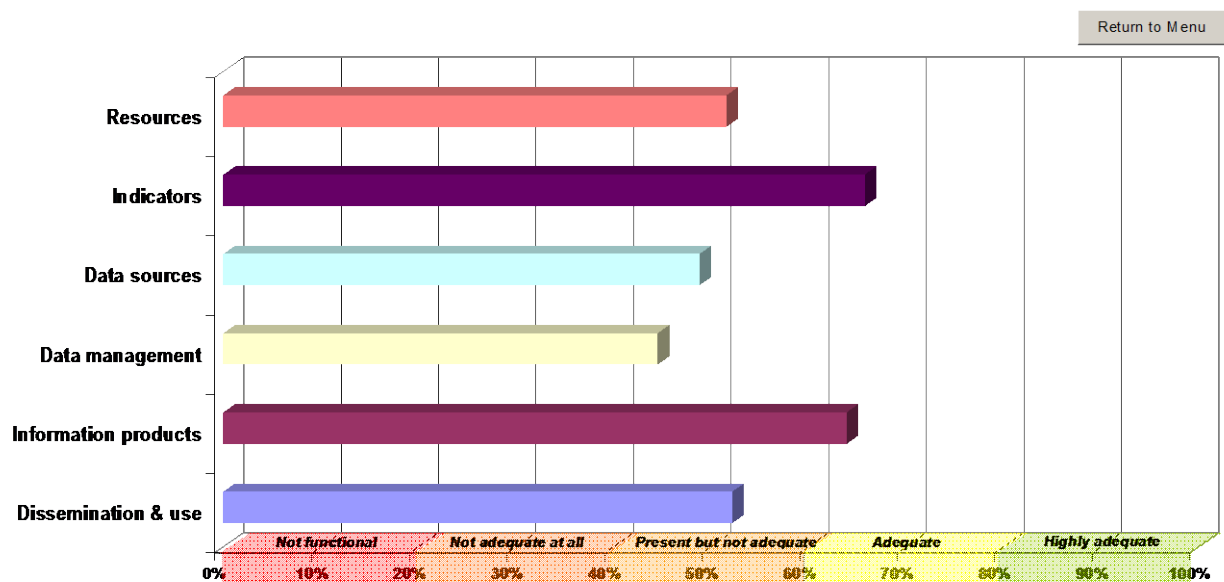


Figure - Assessment Results on Overall HIS Categorioe

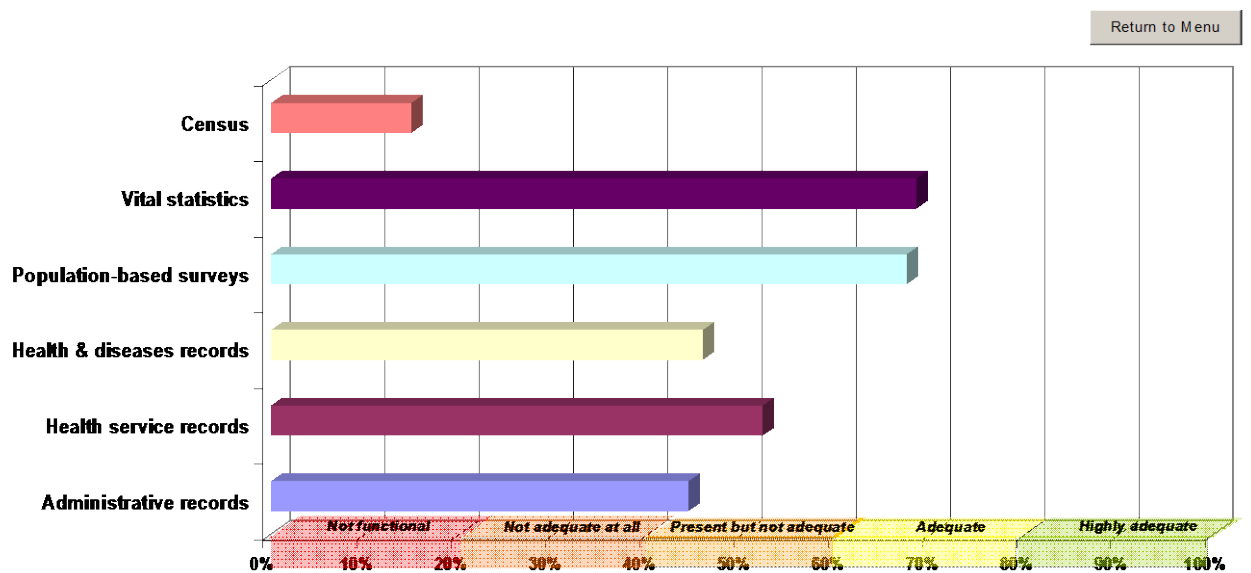


Figure - Assessment Results on Data Sources

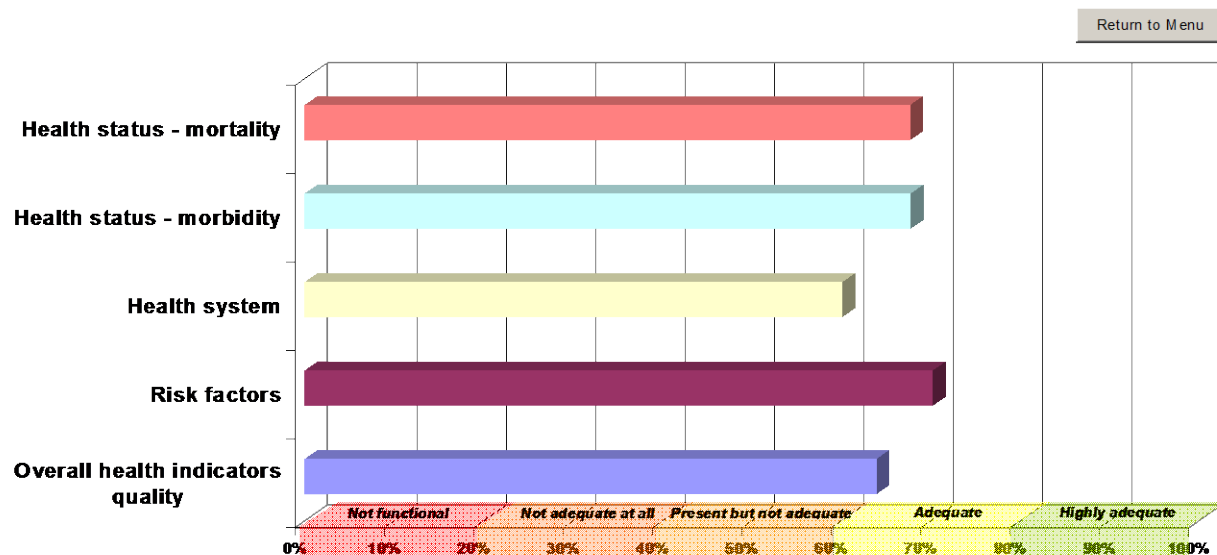


Figure - Assessment Results on Information Products: Selected Indicator

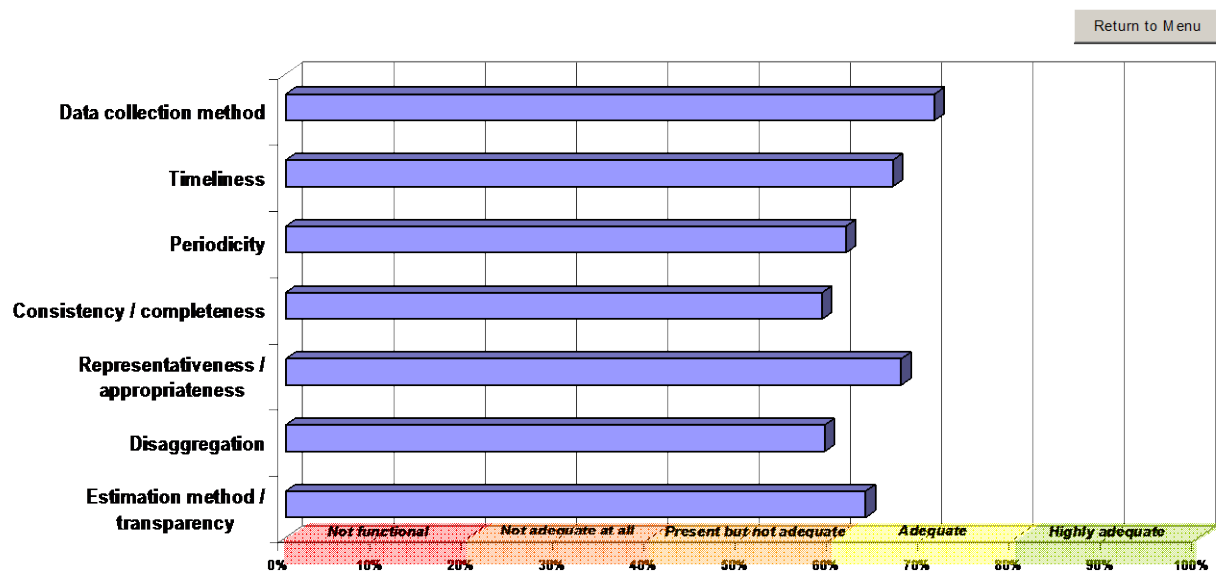


Figure - Assessment Results on Quality of Health Indicators



# Vision, Objectives and Interventions

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The Health Information System Strategic Plan is developed based on the vision, goals and objectives of the Ministry of Health as follows.

## **Vision Statement**

A simple, effective and systematic health information system established at all levels of health care delivery for the strengthening of health system

## **General objective**

- To improve the availability, accessibility and utilization of quality health information

## **Strategic objectives**

- To enhance the HIS commitment, coordination and HIS resources
- To improve the quality of the hospital data recording and reporting
- To improve the quality of the public health data recording and reporting
- To develop a reporting system for private health sector
- To improve the coverage and quality of vital registration system
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- To improve data management, and data sharing encompassing IT development
- To promote utilization of health information in decision making process

# Myanmar National HIS Strategic Plan (2011 -2015)

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## Objectives and Strategies

### Objective 1- To enhance commitment, coordination and resources for HIS

| Performance Objective                                                 | Strategy                                                                                                                                                  |
|-----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.1 To enhance Commitment and co-ordination for HIS                   | 1.1.1 Establishing HIS steering and working committee with description of roles and responsibilities                                                      |
|                                                                       | 1.1.2 Ensuring that roles and responsibilities of HIS working committee activated                                                                         |
|                                                                       | 1.1.3 Developing national HIS policy                                                                                                                      |
|                                                                       | 1.1.4 Development and implementation of coordination mechanism to ensure effective management covering administrative, enforcement and regulatory measure |
| 1.2 To expand and strengthen the HIS staff                            | 1.2.1 Restructuring and expansion of health information section from central to district level                                                            |
|                                                                       | 1.2.2 Capacity building on health information sciences and related fields                                                                                 |
|                                                                       | 1.2.3 Development of a computerized data base for human resource                                                                                          |
| 1.3 To ensure adequate financial management resource                  | 1.3.1 Advocacy with donor agencies for resource sharing for HIS                                                                                           |
|                                                                       | 1.3.2 Advocacy with government for greater allocation of resource for HIS related activities                                                              |
| 1.4. To improve working environment for health information management | 1.4.1 Ensuring adequate logistics support and supplies for HMIS                                                                                           |
|                                                                       | 1.4.2 Re-equipment of Office with complete ICT resources for Health Information personnel at all levels                                                   |
|                                                                       | 1.4.3 Development of drug/logistics management information system                                                                                         |
|                                                                       | 1.4.4 Strengthening cooperation, coordination and collaboration among all stakeholders                                                                    |

## Objective 2 - To Improve the Quality of Hospital Data Recording and Reporting

| Performance Objective                                                                     | Strategy                                                                                                          |
|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| 2.1 To standardize the medical record forms (MR 1-20) (both public and private hospitals) | 2.1.1 Review & revision of existing forms and developing standardized forms in consultation with all stakeholders |
| 2.2 To develop guidelines for medical record documentation and ICD 10                     | 2.2.1 Developing guidelines and manual for medical record documentation, reporting and using ICD 10               |
| 2.3 To improve the quality of service records and report                                  | 2.3.1 Training on data quality including the use of ICD                                                           |
|                                                                                           | 2.3.2 Upgrading software program for hospital information system                                                  |
|                                                                                           | 2.3.3 Strengthening supervision, monitoring, evaluation and feedback mechanism                                    |
|                                                                                           | 2.3.4 Revitalizing and updating data management procedure                                                         |

## Objective 3 - To Improve the Quality of Public Health Data Recording and Reporting

| Performance Objective                                                                                     | Strategy                                                                                                                                     |
|-----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| 3.1 To develop national core indicators on health                                                         | 3.1.1 Review & revision of existing indicators and developing National core indicators set by HIS working committee                          |
| 3.2 To update, produce and disseminate minimum essential data set for public health services periodically | 3.2.1 Updating existing data set used in routine public health information system                                                            |
|                                                                                                           | 3.2.2 Development of data dictionary based on revised data set which can be used in accomplishing data collection and reporting requirements |
|                                                                                                           | 3.2.3 Dissemination of data dictionary used in accomplishing data collection and reporting                                                   |
| 3.3 To strengthen supervision and monitoring                                                              | 3.3.1 Development and documentation guidelines for monitoring and evaluation of data quality                                                 |
|                                                                                                           | 3.3.2 Strengthening supervision, monitoring, evaluation and feedback mechanism                                                               |

#### Objective 4 - To develop a reporting system for private health sector

| Performance Objective                                                  | Strategy                                                   |
|------------------------------------------------------------------------|------------------------------------------------------------|
| 4.1 To ensure availability of health information from private hospital | 4.1.1 legislative & law enforcement                        |
|                                                                        | 4.1.2 Establishing and strengthening HIS in private sector |

#### Objective 5 - To improve the coverage and quality of vital registration system

| Performance Objective                                                 | Strategy                                                                                         |
|-----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| 5.1 To increase coverage of VRS                                       | 5.1.1 Advocacy , coordination & cooperation with concerned departments                           |
|                                                                       | 5.1.2 Awareness raising for properly & timely reporting habits                                   |
| 5.2 To improve the quality of recording and reporting of vital events | 5.2.1 Training on ICD 10 and IRIS software on selection of underlying cause of deaths            |
|                                                                       | 5.2.2 Sample facility based survey on correctly preparing and submitting death certificate forms |
|                                                                       | 5.2.3 Community survey to identify cause of death by verbal autopsy method                       |

#### Objective 6 -To Improve surveillance system on disease and health

| Performance Objective                              | Strategy                                                                                  |
|----------------------------------------------------|-------------------------------------------------------------------------------------------|
| 6.1 Improve disease and health surveillance system | 6.1.1 Ensuring adequate Resource including capacity building and communication facilities |
|                                                    | 6.1.2 Monitoring, supervision and evaluation for sustainability                           |

## Objective 7 - To encourage population based survey

| Performance Objective                                              | Strategy                                                                                          |
|--------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| 7.1 To improve availability and quality of population based survey | 7.1.1 Formation of survey coordination body for inter and intra departmental collaboration        |
|                                                                    | 7.1.2 Advocacy of stakeholders on importance of Population based survey                           |
|                                                                    | 7.1.3 Fund raising from various sources for Population based survey                               |
|                                                                    | 7.1.4 Building capacity on community survey design, processing and analysis                       |
|                                                                    | 7.1.5 Population based survey to attain disaggregated data which are not obtain by routine system |

## Objective 8- To improve data management, data sharing concerning IT development

| Performance Objective                                                                                               | Strategy                                                                                                          |
|---------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| 8.1 Expand appropriate application of information and communication technology in current health information system | 8.1.1 Building information infrastructure by providing computer hardware and necessary equipments                 |
|                                                                                                                     | 8.1.2 Support for the procurement of software such as geographic information system, service availability mapping |
|                                                                                                                     | 8.1.3 Training program on IT for HIS staff at different levels                                                    |
| 8.2 Strengthening of data sharing and analysis at all levels                                                        | 8.2.1 Strengthening mechanism to facilitate vertical and horizontal transmission of information                   |
|                                                                                                                     | 8.2.2 Enhancing an integrated health database at national and sub national levels                                 |
|                                                                                                                     | 8.2.3 Capacity building for data analysis technique to address data problems                                      |
|                                                                                                                     | 8.2.4 Establishing local area network in one model hospital for computer assisted medical record system           |
|                                                                                                                     | 8.2.5 Facilitating access to health and health related data by users                                              |

## Objective 9-To promote Utilization of Health Information in decision making process

| Performance Objective                                       | Strategy                                                                                                                                              |
|-------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9.1 To create the culture of evidence based decision making | 9.1.1 Advocating stakeholders to understand and take actions on existing and emergence health problems                                                |
|                                                             | 9.1.2 Training on data utilization for program planning, management, monitoring, evaluation and policy formulation                                    |
|                                                             | 9.1.3 Encouraging use of information for decision making by inclusion of information use as one of criteria for assessing performance of health staff |



# Activities

| Activities                                                                                                                                 | Primary Product                     | Time Frame |      |      |      |      | Responsible Department | Types of Additional Resources |
|--------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|------------|------|------|------|------|------------------------|-------------------------------|
|                                                                                                                                            |                                     | 2011       | 2012 | 2013 | 2014 | 2015 |                        |                               |
| <b>Objective 1. To enhance commitment, coordination and resources for HIS</b>                                                              |                                     |            |      |      |      |      |                        |                               |
| <b>Performance Objective 1.1 To enhance commitment and coordination for HIS</b>                                                            |                                     |            |      |      |      |      |                        |                               |
| <b>Intervention 1.1.1: Establishing national HIS steering and working committee with description of roles and responsibilities</b>         |                                     |            |      |      |      |      |                        |                               |
| Identification of stakeholders who should involved in national committee                                                                   | Identified stakeholders             | √          |      |      |      |      | DHP                    |                               |
| Preparation of proposal for establishment of national HIS steering and working committee and roles and responsibility of committee members | Proposal for national HIS committee | √          |      |      |      |      | MOH                    |                               |
| Submit proposal to higher authority for permission                                                                                         | National HIS committee              | √          |      |      |      |      | DHP                    |                               |
| Distribution of written circulars including terms of reference (TOR)                                                                       | National HIS committee              | √          |      |      |      |      | DHP                    |                               |
| Regular review and revise of terms of reference                                                                                            | Updated TOR                         |            |      | √    |      | √    | MOH                    |                               |
| <b>Intervention 1.1.2: Ensuring that roles and responsibility of HIS steering and working committee are activated</b>                      |                                     |            |      |      |      |      |                        |                               |
| Conduct series of meetings and carry out roles and responsibilities already described in formation                                         | Functioning HIS committee           | √          | √    | √    | √    | √    | All stakeholders       | Financial                     |



| Activities                                                                                                                                                              | Primary Product              | Time Frame |      |      |      |      | Responsible Department  | Types of Additional Resources |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|------------|------|------|------|------|-------------------------|-------------------------------|
|                                                                                                                                                                         |                              | 2011       | 2012 | 2013 | 2014 | 2015 |                         |                               |
| Intervention 1.1.3: Develop national HIS policy                                                                                                                         |                              |            |      |      |      |      |                         |                               |
| Review existing HIS policy                                                                                                                                              | Existing gaps                | √          |      |      |      |      | DHP                     | Financial                     |
| Study of HIS policy in other countries                                                                                                                                  | References                   |            | √    |      |      |      |                         | Technical and financial       |
| Conduct meeting for development of HIS policy                                                                                                                           | Consensus among stakeholders |            | √    |      |      |      | All related departments | Financial, Technical          |
| Submission of written HIS policy to higher level for approval                                                                                                           | HIS policy                   |            |      | √    |      |      | DHP                     | Financial                     |
| Intervention 1.1.4: Development and implementation of coordination mechanism to ensure effective management covering administrative, enforcement and regulatory measure |                              |            |      |      |      |      |                         |                               |
| Conduct meeting to share the information among concerned department and find the way to solve the problem by integrated approach                                        | More coordination            | √          | √    | √    | √    | √    | All stakeholders        | Financial                     |

| Activities                                                                                                                   | Primary Product    | Time Frame |      |      |      |      | Responsible Department | Types of Additional Resources |
|------------------------------------------------------------------------------------------------------------------------------|--------------------|------------|------|------|------|------|------------------------|-------------------------------|
|                                                                                                                              |                    | 2011       | 2012 | 2013 | 2014 | 2015 |                        |                               |
| Performance Objective 1.2 To expand and strengthen the HIS staff                                                             |                    |            |      |      |      |      |                        |                               |
| Intervention 1.2.1 Restructuring and expansion of health information section from central to district level                  |                    |            |      |      |      |      |                        |                               |
| Review the Information staff manpower                                                                                        |                    | √          |      |      |      |      | HIS Committee          |                               |
| Restructure organization set up                                                                                              | Organization chart |            | √    |      |      |      | HIS Committee          |                               |
| Put forward to higher authority for permission of revised organizational set up                                              | Success or failure |            | √    |      |      |      | NHC                    |                               |
| Vitalize reorganization                                                                                                      |                    |            |      | √    |      |      | DHP                    |                               |
| Intervention 1.2.2 Capacity building on health information sciences and related fields                                       |                    |            |      |      |      |      |                        |                               |
| Intervention 1.2.2.a : Capacity building of HIS staff in local                                                               |                    |            |      |      |      |      |                        |                               |
| Conduct local trainings for HIS staff on (ICD-10, medical record , ICT, statistics, demography, epidemiology and management) | Skilled persons    | √          | √    | √    | √    | √    |                        |                               |
| Capacity building of Hospital information staff on medical record system (phase by phase)                                    | Skilled persons    | √          | √    | √    | √    | √    | DHP                    | Financial                     |
| Capacity building of Hospital information staff on ICD 10 (phase by phase)                                                   | Skilled persons    | √          | √    | √    | √    | √    | DHP                    | Financial                     |
| Capacity building of Hospital information staff on ICT (phase by phase)                                                      | Skilled persons    | √          | √    | √    | √    | √    | DHP                    | Financial                     |
| Capacity building of public health information staff on epidemiology (phase by phase)                                        | Skilled persons    | √          | √    | √    | √    | √    | DHP                    | Financial                     |

| Activities                                                                               | Primary Product                 | Time Frame |      |      |      |      | Responsible Department | Types of Additional Resources |
|------------------------------------------------------------------------------------------|---------------------------------|------------|------|------|------|------|------------------------|-------------------------------|
|                                                                                          |                                 | 2011       | 2012 | 2013 | 2014 | 2015 |                        |                               |
| Capacity building of public health information staff on demography (phase by phase)      | Skilled persons                 | √          | √    | √    | √    | √    | DHP                    | Financial                     |
| Capacity building of public health information staff on statistics (phase by phase)      | Skilled persons                 | √          | √    | √    | √    | √    | DHP                    | Financial                     |
| Capacity building for health care financing (phase by phase)                             | Skilled persons                 | √          | √    | √    | √    | √    | DHP                    | Financial                     |
| Capacity building of health information staff on management (phase by phase)             | Skilled persons                 | √          | √    | √    | √    | √    | DHP                    | Financial                     |
| Conduct HMIS training to basic health staff                                              | Skilled persons                 | √          | √    | √    | √    | √    | DHP                    | Financial                     |
| <b>Intervention 1.2.2.b: Providing opportunity to learn international experience</b>     |                                 |            |      |      |      |      |                        |                               |
| Send health information officers abroad for further study of health information sciences | Degree, Certificate             | √          | √    | √    | √    | √    | Donor                  | Tution, travel costs          |
| <b>Intervention 1.2.2.c: Include HIS in pre-service curriculum of BHS</b>                |                                 |            |      |      |      |      |                        |                               |
| Coordinated meeting with DMS to include HIS in pre-service curriculum of BHS             | Consensus preservice curriculum |            | √    |      |      |      | DHP,DMS                | Financial                     |
| Preparation of detailed curriculum                                                       | Curriculum                      |            |      | √    |      |      | DHP,DMS                | Financial                     |
| Submission of higher level for approval                                                  | Approved HIS curriculum         |            |      |      | √    |      | DMS                    |                               |
| Continuous training as curriculum                                                        | Teach HIS in preservice         |            |      |      |      | √    | DMS                    |                               |

| Activities                                                                                                                   | Primary Product                                  | Time Frame |      |      |      |      | Responsible Department    | Types of Additional Resources |
|------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|------------|------|------|------|------|---------------------------|-------------------------------|
|                                                                                                                              |                                                  | 2011       | 2012 | 2013 | 2014 | 2015 |                           |                               |
| Intervention 1.2.2.d: Inclusion of ICD 10 and medical record documentation in pre-service curriculum of medical doctors      |                                                  |            |      |      |      |      |                           |                               |
| Coordinated meeting with DMS to include ICD 10 and medical record documentation in pre-service curriculum of medical doctors | Consensus pre-service curriculum                 |            |      | √    |      |      | DHP,DMS                   | Financial                     |
| Preparation of detailed curriculum                                                                                           | Curriculum                                       |            |      | √    |      |      | DHP,DMS                   | Financial                     |
| Submission of higher level for approval                                                                                      | Approved HIS curriculum                          |            |      |      | √    |      | DMS                       |                               |
| Teaching of medical doctors (as usual)                                                                                       | Teach HIS, ICD, Medical record in pre-service    |            |      |      |      | √    | DMS                       |                               |
| Intervention 1.2.3: Development of a computerized database for human resource                                                |                                                  |            |      |      |      |      |                           |                               |
| Identify and assign focal department for human resource database                                                             | Report on existing situation with recommendation |            | √    |      |      |      | All concerned departments | Financial                     |
| Review existing human resource information from various department under Ministry of Health                                  |                                                  |            | √    |      |      |      | All concerned departments |                               |
| Conduct coordination meeting with related departments and produce recommendation                                             |                                                  |            | √    |      |      |      | All concerned departments |                               |
| Development of data collection format                                                                                        | Data collection format                           |            | √    |      |      |      | MOH                       |                               |
| Develop guideline and procedure for data collection, store and dissemination to users                                        | Guideline on procedure produced                  |            |      | √    |      |      | All concerned departments | Financial                     |
| Disseminate guideline manual                                                                                                 |                                                  |            |      | √    |      |      | MOH                       |                               |
| Data collection of human resource for health at various level                                                                | Data                                             |            |      | √    | √    | √    | MOH                       | Financial                     |
| Develop software for human resource database written through contract                                                        | Software on human resource developed             |            | √    | √    |      |      | All concerned departments | Financial                     |

| Activities                                                                                                        | Primary Product                    | Time Frame |      |      |      |      | Responsible Department | Types of Additional Resources |
|-------------------------------------------------------------------------------------------------------------------|------------------------------------|------------|------|------|------|------|------------------------|-------------------------------|
|                                                                                                                   |                                    | 2011       | 2012 | 2013 | 2014 | 2015 |                        |                               |
| Pilot testing and revise software                                                                                 |                                    |            |      | √    |      |      |                        |                               |
| Develop user guide and technical guideline manual                                                                 |                                    |            |      | √    |      |      |                        |                               |
| Conduct training on software used in human resource database                                                      |                                    |            |      |      | √    |      |                        |                               |
| Establish data base for human resource                                                                            | Database                           |            |      | √    | √    | √    | MOH                    | Financial & technical         |
| Produce annual report on human resource for health                                                                |                                    |            |      |      | √    | √    | MOH                    |                               |
|                                                                                                                   |                                    |            |      |      |      |      |                        |                               |
| <b>Performance Objective 1.3 To ensure adequate financial management resource</b>                                 |                                    |            |      |      |      |      |                        |                               |
| <b>Intervention 1.3.1 :Advocacy with donor agencies for resource sharing for HIS</b>                              |                                    |            |      |      |      |      |                        |                               |
| Coordinating meeting with donor agencies                                                                          | Coordination among related sectors | √          | √    | √    | √    | √    | MOH                    |                               |
| <b>Intervention 1.3.2: Advocacy with government for greater allocation of resource for HIS related activities</b> |                                    |            |      |      |      |      |                        |                               |
| Preparation of facts and figures and importance of HIS for how to advocate higher authority                       | Advocacy materials                 | √          | √    | √    | √    | √    | MOH                    |                               |
| Conduct advocacy meeting for permission of regular budget for implementation of HIS activities                    | HIS budget                         | √          | √    | √    | √    | √    | MOH                    | Financial                     |

| Activities                                                                                                                            | Primary Product                    | Time Frame |      |      |      |      | Responsible Department | Types of Additional Resources |
|---------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|------------|------|------|------|------|------------------------|-------------------------------|
|                                                                                                                                       |                                    | 2011       | 2012 | 2013 | 2014 | 2015 |                        |                               |
| Performance Objective 1.4 To improve working environment for health information management                                            |                                    |            |      |      |      |      |                        |                               |
| Intervention 1.4.1: Ensuring adequate logistics support and supplies for HMIS                                                         |                                    |            |      |      |      |      |                        |                               |
| Data collection on existing situation of logistic support and supply related to health information such as registers and report forms |                                    |            | √    |      |      |      | DHP/DOH                | Financial                     |
| Estimation of logistics requirements                                                                                                  | List of logistic needs             |            | √    |      |      |      |                        |                               |
| Submission of proposal for supply needs of information departments from central to district level                                     | Proposal                           |            |      | √    |      |      |                        |                               |
| Procurement and provision of the logistic needs of information departments of all hospitals( phase by phase )                         | Adequate logistics                 |            |      | √    | √    | √    |                        | Financial                     |
| Intervention 1.4.2: Re-equipment of Office with complete ICT resources for Health Information personnel at all levels                 |                                    |            |      |      |      |      |                        |                               |
| Assessment of IT facilities at all levels                                                                                             | Existing situation                 | √          | √    |      |      |      | DHP                    | Perdiem, travel cost          |
| Support IT facilities according to assessment results                                                                                 | Sufficient IT facilities           | √          | √    | √    | √    | √    | Donor                  | Financial                     |
| Intense application of ICT                                                                                                            | Use ICT                            | √          | √    | √    | √    | √    |                        |                               |
| Intervention 1.4.3: Development of drug/logistics management information system                                                       |                                    |            |      |      |      |      |                        |                               |
| Intervention 1.4.3.a : Consensus meeting for LMIS                                                                                     |                                    |            |      |      |      |      |                        |                               |
| Establish expert committee to review existing drug information system                                                                 | Expert report with recommendations |            | √    |      |      |      | MOH/CMSD               | Financial                     |
| Conduct series of review meeting                                                                                                      |                                    |            | √    |      |      |      |                        |                               |
| Publish committee meeting report with recommendation                                                                                  |                                    |            | √    |      |      |      |                        |                               |

| Activities                                                                                            | Primary Product                                                          | Time Frame |      |      |      |      | Responsible Department | Types of Additional Resources |
|-------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|------------|------|------|------|------|------------------------|-------------------------------|
|                                                                                                       |                                                                          | 2011       | 2012 | 2013 | 2014 | 2015 |                        |                               |
| <b>Intervention 1.4.3.b :Development of data collection tools and manual</b>                          |                                                                          |            |      |      |      |      |                        |                               |
| Assign an expert committee to setup procedure and develop guidelines for standard operating procedure | Procedure and guidelines for ordering of drugs established and published |            | √    |      |      |      | MOH / CMSD             | Financial                     |
| Conduct "X" number of meetings                                                                        |                                                                          |            | √    |      |      |      |                        |                               |
| Publish reordering guidelines                                                                         |                                                                          |            | √    |      |      |      |                        |                               |
| Print required ordering forms                                                                         |                                                                          |            |      | √    |      |      |                        |                               |
| Conduct training on new procedure and guidelines                                                      |                                                                          |            |      | √    |      |      |                        |                               |
| <b>Intervention 1.4.3.c : Development of software for LMIS</b>                                        |                                                                          |            |      |      |      |      |                        |                               |
| Identify a suitable software development company                                                      | Drug management software is developed                                    |            | √    |      |      |      | MOH / CMSD             | Financial                     |
| Call for proposals for contract                                                                       |                                                                          |            | √    |      |      |      |                        |                               |
| Select contract                                                                                       |                                                                          |            | √    |      |      |      |                        |                               |
| Conduct system analysis                                                                               |                                                                          |            | √    |      |      |      |                        |                               |
| Develop and approve prototype                                                                         |                                                                          |            | √    |      |      |      |                        |                               |
| Develop full version of software                                                                      |                                                                          |            | √    | √    |      |      |                        |                               |

| Activities                                                                                                  | Primary Product                   | Time Frame |      |      |      |      | Responsible Department    | Types of Additional Resources |
|-------------------------------------------------------------------------------------------------------------|-----------------------------------|------------|------|------|------|------|---------------------------|-------------------------------|
|                                                                                                             |                                   | 2011       | 2012 | 2013 | 2014 | 2015 |                           |                               |
| Pilot testing and finalize the software                                                                     |                                   |            |      | √    |      |      |                           |                               |
| Develop user and technical manuals                                                                          |                                   |            |      | √    |      |      |                           |                               |
| Conduct TOT and multiplier training                                                                         |                                   |            |      |      | √    |      |                           |                               |
| <b>Intervention 1.4.3.d : Assign data management manager and implementing LMIS</b>                          |                                   |            |      |      |      |      | MOH / CMSD                |                               |
| Monitor drug utilization, supply and stocks                                                                 |                                   |            |      |      | √    | √    |                           |                               |
| Produce periodic review reports                                                                             |                                   |            |      |      | √    | √    |                           |                               |
| <b>Intervention 1.4.4: Strengthening cooperation, coordination and collaboration among all stakeholders</b> |                                   |            |      |      |      |      |                           |                               |
| Conduct series of meetings to share information and carry out integrated approach                           | Team work                         | √          | √    | √    | √    | √    | All concerned departments | Technical & financial         |
| Supervision by each level to promote working environment                                                    | Supportive supervision            | √          | √    | √    | √    | √    |                           | Technical & financial         |
| Coordination of all stakeholders to promote information decision making cycle                               | Decision making by evidence based | √          | √    | √    | √    | √    |                           | Technical & financial         |



| Activities                                                                                                                        | Primary Product               | Time Frame |      |      |      |      | Responsible Department | Types of Additional Resources |
|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------|------|------|------|------|------------------------|-------------------------------|
|                                                                                                                                   |                               | 2011       | 2012 | 2013 | 2014 | 2015 |                        |                               |
| Objective 2. To Improve the Quality of Hospital Data Recording and Reporting                                                      |                               |            |      |      |      |      |                        |                               |
| Performance Objective 2.1 To standardize the medical record forms (MR 1-20) (both public and private hospitals)                   |                               |            |      |      |      |      |                        |                               |
| Intervention 2.1.1: Review and revision of existing forms and developing standardized forms in consultation with all stakeholders |                               |            |      |      |      |      |                        |                               |
| Review of existing medical record forms used in both public and private hospitals                                                 | Standard medical record forms |            | √    |      |      |      | DHP/DOH                | Financial                     |
| Development of standardized form to meet quality documentation                                                                    |                               |            | √    |      |      |      |                        | Financial                     |
| Produce instruction and manual to use standard medical record forms                                                               |                               |            | √    |      |      |      |                        | Financial                     |
| Monitor the use of standardized forms in all hospitals                                                                            |                               |            |      | √    | √    | √    |                        | Financial                     |
| Performance objective 2.2 To develop guidelines for medical record documentation and ICD 10                                       |                               |            |      |      |      |      |                        |                               |
| Intervention 2.2.1: Developing guidelines and manual for medical record documentation, reporting and using ICD 10                 |                               |            |      |      |      |      |                        |                               |
| Write guideline and manual for medical record documentation, reporting and ICD 10                                                 | Manual                        | √          | √    |      |      |      | DHP/DOH                |                               |
| Printing and distribution of guidelines and manual                                                                                |                               |            | √    | √    | √    | √    |                        | Financial                     |
| Performance objective 2.3 To improve the quality of service records and report                                                    |                               |            |      |      |      |      |                        |                               |
| Intervention 2.3.1 Training on data quality including the use of ICD                                                              |                               |            |      |      |      |      |                        |                               |
| Conduct training on data quality at different stages                                                                              | Skilled person                | √          | √    | √    | √    | √    | DHP/DOH                | Financial                     |
| Purchase and distribution of ICD manuals                                                                                          | Received ICD                  | √          | √    | √    | √    | √    | DHP/DOH                | Financial                     |

| Activities                                                                                   | Primary Product              | Time Frame |      |      |      |      | Responsible Department | Types of Additional Resources |
|----------------------------------------------------------------------------------------------|------------------------------|------------|------|------|------|------|------------------------|-------------------------------|
|                                                                                              |                              | 2011       | 2012 | 2013 | 2014 | 2015 |                        |                               |
| Intervention 2.3.2: Upgrading software program for hospital information system               |                              |            |      |      |      |      |                        |                               |
| Revise existing software used in central level                                               | Updated software for central |            | √    |      |      |      | DHP/DOH                | Technical, financial          |
| Using updated software in central level                                                      |                              |            |      | √    | √    | √    |                        |                               |
| Update the software used in hospitals                                                        | Software for hospitals       |            | √    | √    |      |      |                        | Technical, financial          |
| Pilot testing on revised software in hospitals                                               |                              |            |      | √    |      |      |                        | Financial                     |
| Develop user guide and technical guideline manual                                            | Manual                       |            |      | √    |      |      |                        | Financial                     |
| Conduct training on software used in hospital database                                       | Trained person               |            |      |      | √    | √    |                        | Financial                     |
| Intervention 2.3.3: Strengthening supervision, monitoring, evaluation and feedback mechanism |                              |            |      |      |      |      |                        |                               |
| Intervention 2.3.3.a: Revise HIS monitoring checklist                                        |                              |            |      |      |      |      |                        |                               |
| Meeting on revise of HIS monitoring checklist                                                | HIS monitoring checklist     |            | √    |      |      |      | DHP/DOH                | Financial                     |
| Revise of HIS monitoring checklist for all levels                                            |                              |            | √    |      |      |      |                        |                               |
| Pretest in some selected townships /Hospitals                                                |                              |            | √    |      |      |      |                        |                               |
| Revise and finalize the checklist                                                            |                              |            | √    |      |      |      |                        |                               |

| Activities                                                                                               | Primary Product       | Time Frame |      |      |      |      | Responsible Department | Types of Additional Resources |
|----------------------------------------------------------------------------------------------------------|-----------------------|------------|------|------|------|------|------------------------|-------------------------------|
|                                                                                                          |                       | 2011       | 2012 | 2013 | 2014 | 2015 |                        |                               |
| Intervention 2.3.3.b: Regular table and field monitoring and corrective actions                          |                       |            |      |      |      |      |                        |                               |
| Conduct regular table monitoring of reports by focal person as well as responsible leader at every level | Monitoring reports    | √          | √    | √    | √    | √    | DHP/DOH                |                               |
| Draw list of tour program on field monitoring                                                            |                       |            | √    | √    | √    | √    |                        | Financial                     |
| Conduct field monitoring and supportive supervision using check list                                     | Improved data quality |            | √    | √    | √    | √    |                        | Financial                     |
| Produce field monitoring report                                                                          |                       |            | √    | √    | √    | √    |                        | Financial                     |
| Actions taken to table and field monitoring reports                                                      |                       |            | √    | √    | √    | √    |                        | Financial                     |
| Intervention 2.3.3.c: Data quality audit/ assessment                                                     |                       |            |      |      |      |      |                        |                               |
| Modify data quality assessment form                                                                      | Data quality assessed | √          |      |      |      |      | DHP/DOH                | Financial                     |
| Conduct data quality assessment in some randomly selected townships /Hospitals                           |                       |            | √    | √    | √    | √    |                        | Financial                     |
| Produce and dissemination of findings on data quality assessment                                         |                       |            | √    | √    | √    | √    |                        | Financial                     |
| Intervention 2.3.3.d: Acknowledgement and feedback on their data to health care providers                |                       |            |      |      |      |      |                        |                               |
| Desk and field monitoring and supervision                                                                | Know situation        | √          | √    | √    | √    | √    | DHP/DOH                | Financial                     |
| Give regular feedback to respective organization                                                         |                       | √          | √    | √    | √    | √    | DHP/DOH                | Financial                     |
| Acknowledge to best performance                                                                          | Motivate              | √          | √    | √    | √    | √    | DHP/DOH                | Financial                     |

| Activities                                                                                                                          | Primary Product                                 | Time Frame |      |      |      |      | Responsible Department | Types of Additional Resources |
|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|------------|------|------|------|------|------------------------|-------------------------------|
|                                                                                                                                     |                                                 | 2011       | 2012 | 2013 | 2014 | 2015 |                        |                               |
| Intervention 2.3.3.e: Conduct annual evaluation for HIS                                                                             |                                                 |            |      |      |      |      |                        |                               |
| Conduct annual evaluation for SWOT analysis and future plan to improve data quality                                                 | Future plan                                     |            | √    | √    | √    | √    | DHP/DOH                | Financial                     |
| Intervention 2.3.4 : Revitalizing and updating data management procedure                                                            |                                                 |            |      |      |      |      |                        |                               |
| Review existing data management procedure                                                                                           | Identify gaps                                   |            | √    |      |      |      | DHP/DOH                | Technical, financial          |
| Workshop/meeting on how to improve data management                                                                                  | Receive advice, ways to improve data management |            | √    |      |      |      |                        | Technical, financial          |
| Develop written updated data management procedure                                                                                   | Written data management procedure               |            |      | √    |      |      |                        | Technical, financial          |
| Objective 3. To Improve the Quality of Public Health Data Recording and Reporting                                                   |                                                 |            |      |      |      |      |                        |                               |
| Performance Objective 3.1 To develop National core indicators on health                                                             |                                                 |            |      |      |      |      |                        |                               |
| Intervention 3.1.1: Review and revision of existing indicators and developing National core indicators set by HIS working committee |                                                 |            |      |      |      |      |                        |                               |
| Review the existing indicators                                                                                                      | National core indicator set                     |            | √    |      |      |      |                        | Financial                     |
| Meeting for setting national core health indicators                                                                                 |                                                 |            | √    |      |      |      |                        |                               |

| Activities                                                                                                                                                         | Primary Product                               | Time Frame |      |      |      |      | Responsible Department    | Types of Additional Resources |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|------------|------|------|------|------|---------------------------|-------------------------------|
|                                                                                                                                                                    |                                               | 2011       | 2012 | 2013 | 2014 | 2015 |                           |                               |
| <b>Performance Objective 3.2 To update, produce and disseminate minimum essential data set for public health service periodically</b>                              |                                               |            |      |      |      |      |                           |                               |
| <b>Intervention 3.2.1: Updating existing data set used in routine public health information system</b>                                                             |                                               |            |      |      |      |      |                           |                               |
| Review of existing indicators; service indicators, administrative indicators and impact indicators for health                                                      | Minimum public health indicator set developed |            |      |      |      | √    | All concerned departments |                               |
| Identification of essential indicators in public health related to monitor progress towards MDGs                                                                   |                                               |            | √    |      |      | √    |                           |                               |
| Approval of minimum essential public health indicator sets                                                                                                         |                                               |            |      |      |      | √    |                           | Financial                     |
| <b>Intervention 3.2.2 : Development of data dictionary based on revised data set which can be used in accomplishing data collection and reporting requirements</b> |                                               |            |      |      |      |      |                           |                               |
| Develop data dictionary for validity of data collection done by all BHS                                                                                            | Data dictionary                               | √          |      |      |      | √    |                           | Financial                     |
| Field testing and revise again                                                                                                                                     |                                               | √          |      |      |      | √    |                           | Financial                     |
| <b>Intervention 3.2.3: Dissemination of data dictionary used in accomplishing data collection and reporting</b>                                                    |                                               |            |      |      |      |      |                           |                               |
| Estimate requirements of data dictionary                                                                                                                           | All BHS received                              | √          |      |      |      |      |                           |                               |
| Printing and distribution of revised data dictionary                                                                                                               |                                               |            | √    |      |      | √    |                           | Financial                     |

| Activities                                                                                                        | Primary Product      | Time Frame |      |      |      |      | Responsible Department | Types of Additional Resources |
|-------------------------------------------------------------------------------------------------------------------|----------------------|------------|------|------|------|------|------------------------|-------------------------------|
|                                                                                                                   |                      | 2011       | 2012 | 2013 | 2014 | 2015 |                        |                               |
| <b>Performance Objective 3.3 To strengthen supervision and monitoring</b>                                         |                      |            |      |      |      |      |                        |                               |
| <b>Intervention 3.3.1: Development and documentation guidelines for monitoring and evaluation of data quality</b> |                      |            |      |      |      |      |                        |                               |
| Development of checklist for monitoring and supervision                                                           | Checklist            | √          | √    | √    | √    | √    | DHP                    | Financial                     |
| Documentation guidelines for monitoring and evaluation of data quality                                            | Guideline            |            | √    | √    | √    | √    | DHP                    | Financial                     |
| <b>Intervention 3.3.2 : Strengthening supervision, monitoring, evaluation and feedback mechanism</b>              |                      |            |      |      |      |      |                        |                               |
| Regular desk monitoring by responsible persons at all levels                                                      | Find unreliable data | √          | √    | √    | √    | √    | DHP/DOH                |                               |
| Regular feedback to data providers                                                                                |                      | √          | √    | √    | √    | √    | DHP                    |                               |
| Regular frequent field visits with monitoring checklist                                                           | Field visit          | √          | √    | √    | √    | √    | DHP                    | Financial                     |
| Acknowledge the BHS who act as good performance in health information                                             |                      |            | √    | √    | √    | √    | DHP                    |                               |
| Selection of outstanding BHS in health information system                                                         | Motivation           |            | √    | √    | √    | √    | DHP/DOH                | Financial                     |
| Give incentives to best performers                                                                                |                      |            | √    | √    | √    | √    | DHP/DOH                |                               |

| Activities                                                                                               | Primary Product               | Time Frame |      |      |      |      | Responsible Department | Types of Additional Resources |
|----------------------------------------------------------------------------------------------------------|-------------------------------|------------|------|------|------|------|------------------------|-------------------------------|
|                                                                                                          |                               | 2011       | 2012 | 2013 | 2014 | 2015 |                        |                               |
| <b>Objective 4. To develop a reporting system from private health sectors</b>                            |                               |            |      |      |      |      |                        |                               |
| <b>Performance Objective 4.1 To ensure availability of health information from private health sector</b> |                               |            |      |      |      |      |                        |                               |
| <b>Intervention 4.1.1: Legislative and law enforcement</b>                                               |                               |            |      |      |      |      |                        |                               |
| Expand private health sector law by several meeting with responsible personnel                           | Private health law            |            | √    |      |      |      | MOH                    | Financial                     |
| Enact the private health sector law                                                                      |                               |            | √    |      |      |      | MOH                    |                               |
| <b>Intervention 4.1.2: Establishing and strengthening HIS in private sector</b>                          |                               |            |      |      |      |      |                        |                               |
| <b>Intervention 4.1.2.a: Create standard minimum data set for private hospital</b>                       |                               |            |      |      |      |      |                        |                               |
| Collect list of private sectors, NGOs and INGOs who are providing health services                        | List of private health sector | √          | √    |      |      |      | DHP,DOH                | Financial                     |
| Conduct workshop among responsible government sectors as well as private sectors                         | Dataset and report form       |            | √    |      |      |      | DHP,DOH                | Financial                     |
| <b>Intervention 4.1.2.b : Establish reporting format and guideline manual</b>                            |                               |            |      |      |      |      |                        |                               |
| Develop manual for data collection and reporting                                                         | Data dictionary               |            | √    |      |      |      | DHP,DOH                | Financial                     |
| Distribute manual and training                                                                           | Skilled person                |            | √    |      |      |      | DHP,DOH                | Financial                     |
| Instruction to submit report to central level                                                            | Instruction                   |            | √    | √    | √    | √    | DHP,DOH                | Financial                     |
| <b>Intervention 4.1.2.c : Training on data recording and reporting</b>                                   |                               |            |      |      |      |      |                        |                               |
| Conduct training on data recording and reporting phase by phase                                          | Trained person                |            | √    | √    | √    | √    | DHP,DOH                | Financial                     |

| Activities                                                                                          | Primary Product             | Time Frame |      |      |      |      | Responsible Department | Types of Additional Resources |
|-----------------------------------------------------------------------------------------------------|-----------------------------|------------|------|------|------|------|------------------------|-------------------------------|
|                                                                                                     |                             | 2011       | 2012 | 2013 | 2014 | 2015 |                        |                               |
| <b>Intervention 4.1.2.d : Link reporting of data with renewing of private sector license</b>        |                             |            |      |      |      |      |                        |                               |
| Monitoring process for regular reporting and feedback                                               | Received quality report     |            | √    | √    | √    | √    | DHP,DOH                | Financial                     |
| Link reporting of data with issuing of private license, permission                                  | Controlled data quality     |            | √    | √    | √    | √    | DHP,DOH                | Financial                     |
| Analysis and report of private health sector performance                                            | Published evaluation report |            | √    | √    | √    | √    | DHP,DOH                | Financial                     |
| <b>Objective 5. To improve the coverage and quality of vital registration system</b>                |                             |            |      |      |      |      |                        |                               |
| <b>Performance Objective 5.1 To increase coverage of vital registration system</b>                  |                             |            |      |      |      |      |                        |                               |
| <b>Intervention 5.1.1 Advocacy, coordination &amp; cooperation with concerned departments</b>       |                             |            |      |      |      |      |                        |                               |
| Advocacy meeting with all concerned departments                                                     | coordination                | √          | √    | √    | √    | √    | MOH                    |                               |
| <b>Intervention 5.1.2 : Awareness raising for properly and timely reporting habits by community</b> |                             |            |      |      |      |      |                        |                               |
| Develop design and produce IEC materials                                                            | Community awareness         | √          | √    |      |      |      | MOH,CSO                | Financial, technical          |
| Printing and distribution of IEC materials                                                          |                             |            | √    | √    | √    | √    | MOH,CSO                | Financial                     |
| Law enforcement for birth and death registration                                                    |                             |            | √    |      |      |      | MOH,CSO                |                               |



| Activities                                                                                                             | Primary Product       | Time Frame |      |      |      |      | Responsible Department | Types of Additional Resources |
|------------------------------------------------------------------------------------------------------------------------|-----------------------|------------|------|------|------|------|------------------------|-------------------------------|
|                                                                                                                        |                       | 2011       | 2012 | 2013 | 2014 | 2015 |                        |                               |
| <b>Performance Objective 5.2 To improve the quality of recording and reporting of vital events</b>                     |                       |            |      |      |      |      |                        |                               |
| <b>Intervention 5.2.1 : Training on ICD 10 and IRIS software on selection of underlying cause of death</b>             |                       |            |      |      |      |      |                        |                               |
| IRIS software installation and conduct training for selection of underlying cause of death                             | Trained person        | √          | √    | √    | √    | √    | DHP                    | Financial                     |
| <b>Intervention 5.2.2 : Sample facility based survey on correctly preparing and submitting death certificate forms</b> |                       |            |      |      |      |      |                        |                               |
| Write proposal for health facility based survey on mortality data quality                                              | Proposal              |            | √    |      |      |      | DHP                    |                               |
| Prepare data collection set, form and manual                                                                           | Dataset, form, manual |            | √    |      |      |      | DHP                    |                               |
| Training of surveyor                                                                                                   | Trained person        |            | √    |      |      |      | DHP                    | Financial                     |
| Field Data collection                                                                                                  | Achieve data          |            | √    |      |      |      | DHP                    | Financial                     |
| Data cleaning, entry and processing                                                                                    | Clean soft data       |            | √    |      |      |      | DHP                    | Financial                     |
| Data analysis and report writing                                                                                       | Report                |            | √    |      |      |      | DHP                    | Financial                     |
| Dissemination of results and use for future plan                                                                       | Future plan           |            | √    |      |      |      | DHP,DOH                | Financial                     |
| <b>Intervention 5.2.3 : Community survey to identify cause of death by verbal autopsy method</b>                       |                       |            |      |      |      |      |                        |                               |
| Write proposal                                                                                                         | Proposal              |            | √    |      |      |      | DHP                    |                               |
| Prepare data collection set, form and manual                                                                           | Dataset, form, manual |            | √    |      |      |      | DHP                    |                               |
| Training of surveyor                                                                                                   | Trained person        |            | √    |      |      |      | DHP                    | Financial                     |

| Activities                                                                                                      | Primary Product           | Time Frame |      |      |      |      | Responsible Department | Types of Additional Resources |
|-----------------------------------------------------------------------------------------------------------------|---------------------------|------------|------|------|------|------|------------------------|-------------------------------|
|                                                                                                                 |                           | 2011       | 2012 | 2013 | 2014 | 2015 |                        |                               |
| Field Data collection                                                                                           | Achieve data              |            | √    |      |      |      | DHP                    | Financial                     |
| Data cleaning, entry and processing                                                                             | Clean soft data           |            | √    |      |      |      | DHP                    | Financial                     |
| Data analysis and report writing                                                                                | Report                    |            | √    |      |      |      | DHP                    | Financial                     |
| Dissemination of results and use for future plan                                                                | Future plan               |            | √    |      |      |      | DHP                    | Financial                     |
| <b>Objective 6. Improve surveillance system on disease and health</b>                                           |                           |            |      |      |      |      |                        |                               |
| <b>Performance Objective 6.1 Improve disease and health surveillance system</b>                                 |                           |            |      |      |      |      |                        |                               |
| <b>Intervention 6.1.1 : Ensuring adequate resource including capacity building and communication facilities</b> |                           |            |      |      |      |      |                        |                               |
| Review legislation related to covering diseases, injury and occupational health as well as data reporting       | Newly enacted legislation | √          | √    |      |      |      | DHP,DOH                | Financial                     |
| Review and update the list and operational definition of notifiable diseases                                    |                           |            | √    |      |      |      | DHP,DOH                | Financial                     |
| Reinforce integrated disease surveillance and response procedures                                               |                           |            | √    |      |      |      | DOH                    | Financial                     |
| Develop outbreak report format and reporting procedure                                                          |                           |            | √    |      |      |      | DHP,DOH                | Financial                     |
| Training on analysis of surveillance data and outbreak response                                                 |                           |            |      | √    |      |      | DHP,DOH                | Financial                     |
| Training on lab confirmation capacity for outbreak investigation                                                |                           |            |      | √    | √    | √    | DOH                    | Financial                     |
| <b>Intervention 6.1.2 : Monitoring, supervision and evaluation for sustainability</b>                           |                           |            |      |      |      |      |                        |                               |
| Field monitoring on assessment of disease surveillance                                                          |                           | √          | √    | √    | √    | √    | DOH                    | Financial                     |
| Annual evaluation for future plan                                                                               |                           | √          | √    | √    | √    | √    | DOH                    | Financial                     |

| Activities                                                                                                      | Primary Product                     | Time Frame |      |      |      |      | Responsible Department        | Types of Additional Resources |
|-----------------------------------------------------------------------------------------------------------------|-------------------------------------|------------|------|------|------|------|-------------------------------|-------------------------------|
|                                                                                                                 |                                     | 2011       | 2012 | 2013 | 2014 | 2015 |                               |                               |
| <b>Objective 7. To encourage population based survey</b>                                                        |                                     |            |      |      |      |      |                               |                               |
| <b>Performance Objective 7.1 : To improve availability and quality of population based survey</b>               |                                     |            |      |      |      |      |                               |                               |
| <b>Intervention 7.1.1: Formation of survey coordination body for inter and intra departmental collaboration</b> |                                     |            |      |      |      |      |                               |                               |
| Establish survey coordination body with responsible person                                                      | Coordinating body                   | √          | √    |      |      |      | MOH,CSO, Pop, Home affair, GA |                               |
| Conduct Meeting or workshop on improvement of survey design, implementation, data analysis and use              | More coordination and collaboration | √          | √    | √    | √    | √    | MOH,CSO, Pop, Home affair, GA | Financial                     |
| <b>Intervention 7.1.2 : Advocacy of stakeholders on importance of population based survey</b>                   |                                     |            |      |      |      |      |                               |                               |
| Advocacy meeting with stakeholders on importance of survey                                                      |                                     | √          | √    | √    | √    | √    | MOH                           |                               |
| <b>Intervention 7.1.3 : Fund raising from various sources for population based survey</b>                       |                                     |            |      |      |      |      |                               |                               |
| Meet with donor agencies for requirements                                                                       |                                     | √          | √    | √    | √    | √    | MOH,MOP                       |                               |
| <b>Intervention 7.1.4 : Building capacity on community survey design, processing and analysis</b>               |                                     |            |      |      |      |      |                               |                               |
| Conduct training on research methodology and survey design and data base management                             | Trained people                      | √          | √    | √    | √    | √    | MOH                           | Financial                     |

| Activities                                                                                                                                        | Primary Product                    | Time Frame |      |      |      |      | Responsible Department | Types of Additional Resources |
|---------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|------------|------|------|------|------|------------------------|-------------------------------|
|                                                                                                                                                   |                                    | 2011       | 2012 | 2013 | 2014 | 2015 |                        |                               |
| <b>Intervention 7.1.5: Population based survey to attain disaggregated data which are not obtained by routine system</b>                          |                                    |            |      |      |      |      |                        |                               |
| Workshop to discuss required data set, survey methodology                                                                                         | Data set, methodology              |            | √    |      |      | √    | DHP,DOH,DMR,CSO        | Financial                     |
| Preparation of data collection forms and instruction manual                                                                                       | Collection forms, manual           |            | √    |      |      | √    | DHP,DMR                |                               |
| Training of enumerators                                                                                                                           | Trained person                     |            | √    |      |      | √    | DMR,DHP                | Financial                     |
| Field Data collection                                                                                                                             | Obtain data                        |            | √    |      |      | √    |                        | Financial                     |
| Data processing, cleaning and analysis                                                                                                            | Reliable data                      |            | √    | √    |      | √    | DHP,DMR                | Financial                     |
| Report writing                                                                                                                                    | Report                             |            | √    | √    |      | √    | DHP,DMR                | Financial                     |
| Dissemination of survey results                                                                                                                   | Awareness and use                  |            | √    | √    |      | √    | DHP,DMR                | Financial                     |
| <b>Objective 8. Improve data management, data sharing concerning IT development</b>                                                               |                                    |            |      |      |      |      |                        |                               |
| <b>Performance Objective 8.1: Expand appropriate application of information and communication technology in current health information system</b> |                                    |            |      |      |      |      |                        |                               |
| <b>Intervention 8.1.1 : Building information infrastructure by providing computer hardware and necessary equipments</b>                           |                                    |            |      |      |      |      |                        |                               |
| Assessment of needs on IT facilities in all health facilities (phase by phase)                                                                    | List of requirements               | √          | √    | √    | √    | √    | MOH                    | Financial                     |
| Provision of IT equipments including computers in health facilities                                                                               | Health facilities with well equips | √          | √    | √    | √    | √    | MOH                    | Financial                     |

| Activities                                                                                                                          | Primary Product                         | Time Frame |      |      |      |      | Responsible Department    | Types of Additional Resources |
|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|------------|------|------|------|------|---------------------------|-------------------------------|
|                                                                                                                                     |                                         | 2011       | 2012 | 2013 | 2014 | 2015 |                           |                               |
| <b>Intervention 8.1.2 : Support for procurement of software such as geographic information system, service availability mapping</b> |                                         |            |      |      |      |      |                           |                               |
| Buy and procurement of software useful in health information system                                                                 | Software                                | √          | √    |      |      |      | MOH                       | Financial                     |
| <b>Intervention 8.1.3 : Training program on IT for HIS staff at different levels</b>                                                |                                         |            |      |      |      |      |                           |                               |
| Conduct training on, IT, software, networking, etc.                                                                                 | Trained person                          |            | √    | √    | √    | √    | MOH                       | Financial                     |
| <b>Performance Objective 8.2 : Strengthening of data sharing and analysis at different levels</b>                                   |                                         |            |      |      |      |      |                           |                               |
| <b>Intervention 8.2.1 : Strengthening mechanism to facilitate vertical and horizontal transmission of information</b>               |                                         |            |      |      |      |      |                           |                               |
| Conduct workshop on how to improve mechanism for rapid transmission of information                                                  | Mechanism                               | √          | √    | √    | √    | √    | MOH                       | Financial                     |
| <b>Intervention 8.2.2: Enhancing an integrated health database at national and sub national levels</b>                              |                                         |            |      |      |      |      |                           |                               |
| Consensus meeting for choosing focal department for data bank                                                                       | Agreement on establishment of Data bank | √          | √    |      |      |      | All concerned departments |                               |
| Coordination with other related sectors to obtain multiple data sources                                                             | Multiple data from various sources      | √          | √    | √    | √    | √    | All concerned departments |                               |

| Activities                                                                                                                   | Primary Product                  | Time Frame |      |      |      |      | Responsible Department    | Types of Additional Resources  |
|------------------------------------------------------------------------------------------------------------------------------|----------------------------------|------------|------|------|------|------|---------------------------|--------------------------------|
|                                                                                                                              |                                  | 2011       | 2012 | 2013 | 2014 | 2015 |                           |                                |
| Provide server computer and data manager for management of data warehouse                                                    | server and assigned data manager |            | √    | √    | √    | √    | DHP                       | Financial, technical           |
| Develop mechanism for updating data and quality assurance system                                                             | Running data bank                |            | √    | √    | √    | √    |                           | Human, financial and logistics |
| Training on handling or managing data bank                                                                                   | Skilled person                   |            | √    | √    | √    | √    |                           | Technical, financial           |
| <b>Intervention 8.2.3 : Capacity building for data analysis technique to address data problems</b>                           |                                  |            |      |      |      |      |                           |                                |
| Capacity building on various data analysis technique                                                                         | Skilled person                   |            | √    | √    | √    | √    | MOH                       | Financial                      |
| <b>Intervention 8.2.4: Establishing local area network in one model hospital for computer assisted medical record system</b> |                                  |            |      |      |      |      |                           |                                |
| Advocate medical superintendent for using LAN and CAMRS                                                                      | Consensus                        |            | √    |      |      |      | All concerned departments | Financial                      |
| Provide computers and facilities in all wards of hospital                                                                    | Physical facilities              |            | √    |      |      |      |                           | Financial                      |
| Develop local area network                                                                                                   | Physical facilities              |            | √    |      |      |      |                           | Financial                      |
| Give training and assign the person                                                                                          |                                  |            | √    |      |      |      |                           | Financial                      |
| Maintenance of LAN and CAMRS                                                                                                 |                                  |            |      | √    | √    | √    |                           | Financial                      |
| <b>Intervention 8.2.5: Facilitating access to health and health related data by users</b>                                    |                                  |            |      |      |      |      |                           |                                |
| Publish quarterly bulletin and annual health reports                                                                         | Reports                          | √          | √    | √    | √    | √    | MOH                       | Financial                      |
| Distribute to all users by various means                                                                                     |                                  | √          | √    | √    | √    | √    | MOH                       | Financial                      |

| Activities                                                                                                                                                                  | Primary Product     | Time Frame |      |      |      |      | Responsible Department | Types of Additional Resources |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|------------|------|------|------|------|------------------------|-------------------------------|
|                                                                                                                                                                             |                     | 2011       | 2012 | 2013 | 2014 | 2015 |                        |                               |
| <b>Objective 9. To Promote utilization of health information in decision making process</b>                                                                                 |                     |            |      |      |      |      |                        |                               |
| <b>Performance Objective 9.1 : To create the culture of evidence based decision making</b>                                                                                  |                     |            |      |      |      |      |                        |                               |
| <b>Intervention 9.1.1 : Advocating stakeholders to understand and take actions on existing and emerging health problems</b>                                                 |                     |            |      |      |      |      |                        |                               |
| Conduct advocacy meeting with stakeholders on existing and emerging health problems                                                                                         | Understand          | √          | √    | √    | √    | √    | MOH                    | Financial                     |
| <b>Intervention 9.1.2 : Training on data utilization for program planning, management, monitoring, evaluation and policy formulation</b>                                    |                     |            |      |      |      |      |                        |                               |
| Conduct training on how to use what data in where                                                                                                                           | Trained person      | √          | √    | √    | √    | √    | MOH                    | Financial                     |
| <b>Intervention 9.1.3 : Encouraging use of information for decision making by inclusion of information use as one of criteria for assessing performance of health staff</b> |                     |            |      |      |      |      |                        |                               |
| Encourage use of information in decision making by various means e.g. Recognition of health staff by using one of the criteria as information use                           | Improve utilization | √          | √    | √    | √    | √    | ALL                    | Financial                     |

## Resource Requirement(2011-2015)

### Objective1. To enhance commitment, coordination and resources for HIS

|     | Performance Objective                                            | 2011             | 2012             | 2013             | 2014                | 2015                | Total               |
|-----|------------------------------------------------------------------|------------------|------------------|------------------|---------------------|---------------------|---------------------|
| 1.1 | To enhance Commitment and co-ordination for HIS                  | \$14,500         | \$15,000         | \$15,000         | \$14,000            | \$14,000            | \$72,500            |
| 1.2 | To expand and strengthen the HIS staff                           | \$179,000        | \$225,500        | \$208,000        | \$227,500           | \$184,000           | \$1,024,000         |
|     | To expand and strengthen the HIS staff(Salary)                   | -                | -                | -                | Kyats<br>46632000   | Kyats<br>46632000   | Kyats<br>93,264,000 |
| 1.4 | To improve working environment for health information management | \$58,000         | \$64,000         | \$82,000         | \$78,000            | \$73,000            | \$355,000           |
|     | <b>Sub Total</b>                                                 | <b>\$251,500</b> | <b>\$304,500</b> | <b>\$305,000</b> | <b>\$319,500</b>    | <b>\$271,000</b>    | <b>\$1,451,500</b>  |
|     |                                                                  |                  |                  |                  | Kyats<br>46,632,000 | Kyats<br>46,632,000 | Kyats<br>93,264,000 |

### Objective 2. To Improve the Quality of Hospital Data Recording and Reporting

|     | Performance Objective                                                                 | 2011            | 2012            | 2013            | 2014            | 2015            | Total            |
|-----|---------------------------------------------------------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|
| 2.1 | To standardize the medical record forms (MR 1-20) (both public and private hospitals) | \$0             | \$9,000         | \$3,000         | \$3,000         | \$3,000         | \$18,000         |
| 2.2 | To develop guidelines for medical record documentation and ICD 10                     | \$2,000         | \$13,000        | \$5,000         | \$5,000         | \$5,000         | \$30,000         |
| 2.3 | To improve the quality of service records and report                                  | \$8,000         | \$26,000        | \$35,000        | \$16,000        | \$16,000        | \$101,000        |
|     | <b>Sub Total</b>                                                                      | <b>\$10,000</b> | <b>\$48,000</b> | <b>\$43,000</b> | <b>\$24,000</b> | <b>\$24,000</b> | <b>\$149,000</b> |

### Objective 3.To Improve the Quality of Public Health Data Recording and Reporting

|     | Performance Objective                                                                                 | 2011            | 2012            | 2013            | 2014            | 2015            | Total            |
|-----|-------------------------------------------------------------------------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|
| 3.1 | To develop national core indicators on health                                                         | -               | \$5,000         | -               | -               | -               | \$5,000          |
| 3.2 | To update, produce and disseminate minimum essential data set for public health services periodically | \$8,000         | \$28,000        | -               | -               | \$58,000        | \$94,000         |
| 3.3 | To strengthen supervision and monitoring                                                              | \$10,000        | \$35,000        | \$35,000        | \$35,000        | \$35,000        | \$150,000        |
|     | <b>Sub Total</b>                                                                                      | <b>\$18,000</b> | <b>\$68,000</b> | <b>\$35,000</b> | <b>\$35,000</b> | <b>\$93,000</b> | <b>\$249,000</b> |

### Objective 4.To develop a reporting system from private health sectors

|     | Performance Objective                                              | 2011     | 2012            | 2013            | 2014            | 2015            | Total           |
|-----|--------------------------------------------------------------------|----------|-----------------|-----------------|-----------------|-----------------|-----------------|
| 4.1 | To ensure availability of health information from private hospital | -        | \$19,000        | \$10,000        | \$10,000        | \$10,000        | \$49,000        |
|     | <b>Sub Total</b>                                                   | <b>-</b> | <b>\$19,000</b> | <b>\$10,000</b> | <b>\$10,000</b> | <b>\$10,000</b> | <b>\$49,000</b> |

### Objective 5. To improve the coverage and quality of vital registration system

|     | Performance Objective                                             | 2011            | 2012            | 2013            | 2014            | 2015            | Total            |
|-----|-------------------------------------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|
| 5.1 | To increase coverage of VRS                                       | \$6,000         | \$13,000        | \$10,000        | \$10,000        | \$10,000        | \$49,000         |
| 5.2 | To improve the quality of recording and reporting of vital events | \$5,000         | \$49,000        | \$5,000         | \$5,000         | \$35,000        | \$99,000         |
|     | <b>Sub Total</b>                                                  | <b>\$11,000</b> | <b>\$62,000</b> | <b>\$15,000</b> | <b>\$15,000</b> | <b>\$45,000</b> | <b>\$148,000</b> |

### Objective 6. Improve surveillance system on disease and health

|     | Performance Objective                          | 2011            | 2012            | 2013            | 2014            | 2015            | Total           |
|-----|------------------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| 6.1 | Improve disease and health surveillance system | \$15,000        | \$15,000        | \$15,000        | \$15,000        | \$15,000        | \$75,000        |
|     | <b>Sub Total</b>                               | <b>\$15,000</b> | <b>\$15,000</b> | <b>\$15,000</b> | <b>\$15,000</b> | <b>\$15,000</b> | <b>\$75,000</b> |

### Objective 7.To encourage population based survey

|     | Performance Objective                                          | 2011     | 2012             | 2013            | 2014            | 2015             | Total            |
|-----|----------------------------------------------------------------|----------|------------------|-----------------|-----------------|------------------|------------------|
| 7.1 | To improve availability and quality of population based survey | -        | \$168,000        | \$13,000        | \$13,000        | \$163,000        | \$357,000        |
|     | <b>Sub Total</b>                                               | <b>-</b> | <b>\$168,000</b> | <b>\$13,000</b> | <b>\$13,000</b> | <b>\$163,000</b> | <b>\$357,000</b> |

### Objective 8. Improve data management, data sharing concerning IT development

|     | Performance Objective                                                                                           | 2011            | 2012             | 2013             | 2014             | 2015             | Total            |
|-----|-----------------------------------------------------------------------------------------------------------------|-----------------|------------------|------------------|------------------|------------------|------------------|
| 8.1 | Expand appropriate application of information and communication technology in current health information system | \$60,000        | \$60,000         | \$60,000         | \$60,000         | \$60,000         | \$300,000        |
| 8.2 | Strengthening of data sharing and analysis at all levels                                                        | -               | \$138,000        | \$78,000         | \$78,000         | \$78,000         | \$372,000        |
|     | <b>Sub Total</b>                                                                                                | <b>\$60,000</b> | <b>\$198,000</b> | <b>\$138,000</b> | <b>\$138,000</b> | <b>\$138,000</b> | <b>\$672,000</b> |

### Objective 9. To Promote utilization of health information in decision making process

|     | Performance Objective                                   | 2011             | 2012             | 2013             | 2014                | 2015                | Total               |
|-----|---------------------------------------------------------|------------------|------------------|------------------|---------------------|---------------------|---------------------|
| 9.1 | To create the culture of evidence based decision making | \$23,000         | \$23,000         | \$23,000         | \$23,000            | \$23,000            | \$115,000           |
|     | <b>Sub Total</b>                                        | <b>\$23,000</b>  | <b>\$23,000</b>  | <b>\$23,000</b>  | <b>\$23,000</b>     | <b>\$23,000</b>     | <b>\$115,000</b>    |
|     | <b>GRAND TOTAL</b>                                      | <b>\$388,500</b> | <b>\$905,500</b> | <b>\$597,000</b> | <b>\$592,500</b>    | <b>\$782,000</b>    | <b>\$3,265,500</b>  |
|     |                                                         |                  |                  |                  | Kyats<br>46,632,000 | Kyats<br>46,632,000 | Kyats<br>93,264,000 |



### Resource Requirement(2011-2015)

| No.                | Objectives                                                              | 2011             |                  | 2012             |                  | 2013             |                  | 2014                |                  | 2015                |                  | TOTAL \$ (2011-2015) |
|--------------------|-------------------------------------------------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|---------------------|------------------|---------------------|------------------|----------------------|
|                    |                                                                         | Recurrent        | Development      | Recurrent        | Development      | Recurrent        | Development      | Recurrent           | Development      | Recurrent           | Development      |                      |
| 1                  | To enhance commitment, coordination and resources for HIS               | \$171,500        | \$80,000         | \$224,500        | \$80,000         | \$218,000        | \$87,000         | \$239,500           | \$80,000         | \$191,000           | \$80,000         | \$1,451,500          |
|                    |                                                                         |                  |                  |                  |                  |                  |                  | Kyats<br>46632000   |                  | Kyats<br>46632000   |                  | Kyats<br>93,264,000  |
| 2                  | To Improve the Quality of Hospital Data Recording and Reporting         | \$10,000         | -                | \$48,000         | -                | \$36,000         | \$7,000          | \$24,000            | -                | \$24,000            | -                | \$149,000            |
| 3                  | To Improve the Quality of Public Health Data Recording and Reporting    | \$18,000         | -                | \$68,000         | -                | \$35,000         | -                | \$35,000            | -                | \$93,000            | -                | \$249,000            |
| 4                  | To develop a reporting system from private health sectors               | \$0              | -                | \$19,000         | -                | \$10,000         | -                | \$10,000            | -                | \$10,000            | -                | \$49,000             |
| 5                  | To improve the coverage and quality of vital registration system        | \$11,000         | -                | \$62,000         | -                | \$15,000         | -                | \$15,000            | -                | \$45,000            | -                | \$148,000            |
| 6                  | Improve surveillance system on disease and health                       | \$15,000         | -                | \$15,000         | -                | \$15,000         | -                | \$15,000            | -                | \$15,000            | -                | \$75,000             |
| 7                  | To encourage population based survey                                    | \$0              | -                | \$168,000        | -                | \$13,000         | -                | \$13,000            | -                | \$163,000           | -                | \$357,000            |
| 8                  | Improve data management, data sharing concerning IT development         | \$10,000         | \$50,000         | \$48,000         | \$150,000        | \$38,000         | \$100,000        | \$38,000            | \$100,000        | \$38,000            | \$100,000        | \$672,000            |
| 9                  | To Promote utilization of health information in decision making process | \$23,000         | -                | \$23,000         | -                | \$23,000         | -                | \$23,000            | -                | \$23,000            | -                | \$115,000            |
| <b>GRAND TOTAL</b> |                                                                         | <b>\$258,500</b> | <b>\$130,000</b> | <b>\$675,500</b> | <b>\$230,000</b> | <b>\$403,000</b> | <b>\$194,000</b> | <b>\$412,500</b>    | <b>\$180,000</b> | <b>\$602,000</b>    | <b>\$180,000</b> | <b>\$3,265,500</b>   |
|                    |                                                                         |                  |                  |                  |                  |                  |                  | Kyats<br>46,632,000 |                  | Kyats<br>46,632,000 |                  | Kyats<br>93,264,000  |

### Resource Requirement (2011-2015)

| Type of Activities       | 2011             | 2012             | 2013             | 2014                    | 2015                    | Total                   |
|--------------------------|------------------|------------------|------------------|-------------------------|-------------------------|-------------------------|
| Meeting/Workshop         | \$30,500         | \$132,500        | \$56,000         | \$78,500                | \$65,000                | \$362,500               |
| Training                 | \$197,000        | \$220,000        | \$220,000        | \$233,000               | \$223,000               | \$1,093,000             |
| Assessment/Review/Survey | \$8,000          | \$203,000        | \$9,000          | \$9,000                 | \$197,000               | \$426,000               |
| Supervision              | \$23,000         | \$33,000         | \$36,000         | \$36,000                | \$36,000                | \$164,000               |
| Logistics Supply         | \$110,000        | \$260,000        | \$224,000        | \$194,000               | \$219,000               | \$1,007,000             |
| Human Resource           | \$20,000         | \$57,000         | \$52,000         | \$42,000                | \$42,000                | \$213,000               |
| Human Resource(Salary)   |                  |                  |                  | Kyats 46,632,000        | Kyats 46,632,000        | Kyats 93,264,000        |
| <b>GRAND TOTAL</b>       | <b>\$388,500</b> | <b>\$905,500</b> | <b>\$597,000</b> | <b>\$592,500</b>        | <b>\$782,000</b>        | <b>\$3,265,500</b>      |
|                          |                  |                  |                  | <b>Kyats 46,632,000</b> | <b>Kyats 46,632,000</b> | <b>Kyats 93,264,000</b> |

