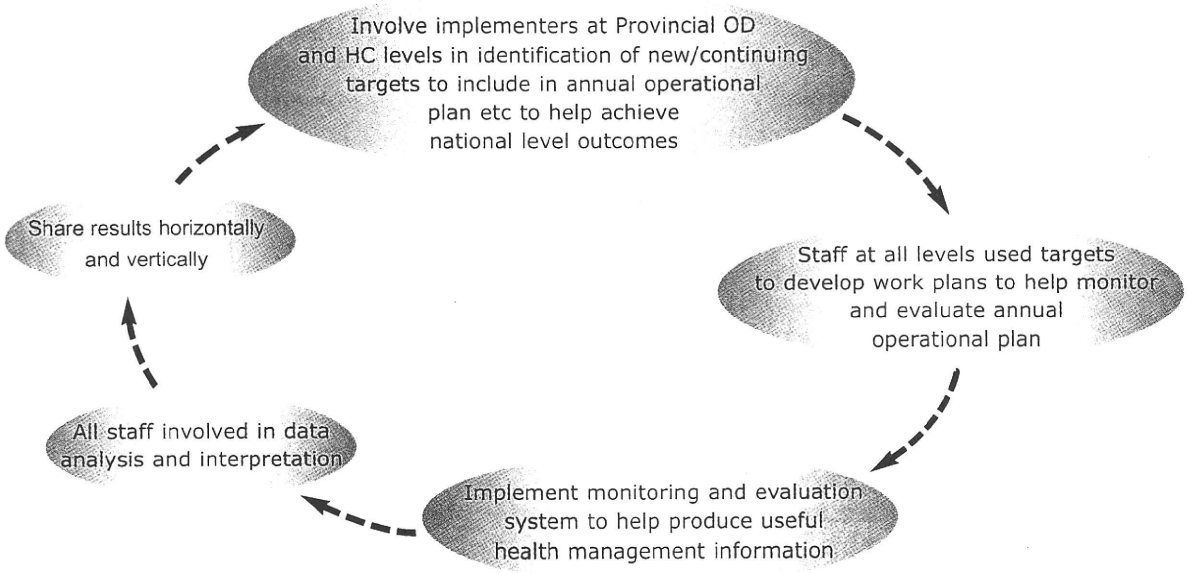
Making monitoring and evaluation user friendly

It is generally accepted that the most important requirement for improving management information systems is to persuade staff at all levels of their importance. Where information simply flows upwards, with no feedback on its use or effective checks on its veracity, it is not surprising that those engaged on collection and reporting have little incentive to ensure reliability or timeliness.

Two approaches have been adopted to address this problem. First, the introduction of routine validation procedures. Methods include simple trend analysis or through direct comparison of reported information and base data. Second, the direct involvement of staff at lower levels in data analysis, interpretation and use.

Figure 1. Ministry of Health monitoring and evaluation cycle, 2002



Monitoring and evaluation system

The strategic plan monitoring and evaluation system is developing a process that will include both of the above elements:

- In terms of explicit cross checking, it will draw on the experience of various data validation studies that have been previously undertaken in the context of the health information system, national programmes and various contracting experiments.
  In particular, it is proposed to incorporate field audits, for which revised draft guidelines and reporting forms will be developed, as part of the routine monitoring programme.

  To constrain the resource costs of these activities it is envisaged that operational districts will take responsibility for validation of a random sample of facility returns, provinces of operational district returns and central departments or national programmes of provincial returns. However, to ensure greater effectiveness, higher levels will evaluate a random sample of the validation exercises of the layer below.

- In terms of staff involvement in analysis, the process of decentralisation and the emphasis placed on the need for evidence based planning in provinces, operating districts and facilities, should gradually increase awareness of their need for good information. For example, experience in existing pilot exercises at facility level suggests that where performance targets are based on previously reported patient numbers, staff quickly become aware that it is unwise to inflate those numbers in the hope of gaining additional resources. To be effective, this process will require a general increase in capacity at all levels to collate, analyse and use information more effectively.

It is recognised that moving to a situation in which all staff are actively involved in data analysis and use will not be a rapid or simple process. A third approach is therefore proposed information sharing, both vertically (between levels) and horizontally (between departments and programmes). The aim will be to make disaggregated data widely available for analysis across the sector.

Core components

In the near future the monitoring and evaluation system will have four core components:

- A revised version of the health information routine reporting system linked to the existing systems but emphasising sector wide management issues
- Routine service delivery studies
- An extended financial reporting system
- A limited number of knowledge, attitude / opinion and practice surveys of households

Aggregation of data

At present, the process of aggregating up from facility to operational district to province implies that little analysis is done anywhere in the system. Even those at the central level, who often have the incentive, capacity and resources (for example computer facilities) to undertake policy relevant analysis, are severely limited by having access only to aggregate information. Computerisation of health information data for example (which has been piloted in Kompong Thom), will make it possible for higher levels in the information system hierarchy to work with disaggregated data down to facility level. Some steps in this direction are being taken. For example, the personnel database maintained by the Department of Human Resource Development has been made available, on CD rom, at provincial level.

Similar procedures will gradually be established whereby higher levels in the hierarchy routinely provide: information; feedback on the quality of that information; and guidance as to what the information indicates or suggests to lower levels. It should be possible, for example, for operational districts, as part of their annual planning process, to directly compare their resources and achievements with those of others in the province or even beyond. Referral hospitals should be able to rank their performance, for example on case fatalities, against hospitals in other provinces.

Health centres should then be able to set utilisation targets by reference to those achieved by others in similar circumstances. Current work on the establishment of e-mail links from provincial health departments to the Communicable Disease Control Department to enhance the 'alert' system should facilitate this process. At a later stage of the implementation of the strategic plan, the possibility of extending computerisation and e-mail links to all operational districts will be explored.

Computerisation should also allow a gradual move towards the development of an integrated information system on individual health facilities. This will eventually combine the health information system data with information on at least human resources, drug use and finance.

At a later stage, disaggregated information relating to health system activities and outcomes will be yet more widely disseminated to increase accountability and transparency. This will allow, for example, non-governmental organisations and others to access the information they need in order to assess the performance of health providers and negotiate improvements where necessary. It is also planned to identify effective mechanisms to extend the monitoring and evaluation system to encompass surveillance of health service delivery outside the public sector.

Institutional issues

Operational districts are central to the monitoring and evaluation system in that they take primary responsibility for data collection and validation. As the strategic plan progresses, provincial health departments will move from primary data collection to the provision of support, training and detailed supervision, though the support function will often involve direct participation in operational district monitoring activities.

There is a critical need to build capacity for planning, monitoring and evaluation at all levels. The central level Department of Planning and Health Information will take the lead in providing technical support and coordination. with all other departments and programmes in the monitoring process. In order to undertake the reporting and validation functions for which they would take the lead responsibility, a much strengthened monitoring and evaluation unit will be created in the near future within the department.

Integrating monitoring and evaluation

The monitoring and evaluation vision in this volume of the health sector strategic plan is based as far as possible on existing systems. Scarcity of data is not the problem. The major, and mutually reinforcing, constraints on effective use of information concern the limited analysis of the data which is available and the lack of coordination between the various sources. Over recent years, many of the key tools necessary for the generation of relevant, timely and useful management information have been introduced.

The aim, over the period of the strategic plan 2003-2007, will be to build on the most successful of these to develop a more integrated system and ensure that it is used in decision-making on priorities and resource allocation at all levels. Monitoring and evaluation is addressed both in terms of strategic plan implementation management and as an objective: increased monitoring and evaluation capacity, allowing key stakeholders in the sector to design and implement policies and programmes on the basis of evidence.

Capacity development

A key role of central ministry institutions - particularly the Department of Planning and Health Information and the National Institute for Public Health, but also line departments - will be to assist provinces to develop the monitoring and evaluation capacity they require in order to assume greater powers of planning, budgeting and managing contracts. At an early stage, in collaboration with provincial health departments, will develop training courses for operational district and facility staff in using information for management meetings and annual planning.

CHAPTER 4

MONITORING AND EVALUATION

Monitoring and evaluation by objectives

Monitoring and evaluation is something every member of the health workforce should do. For example, on a day to day basis, we should be asking ourselves monitoring questions such as 'is this the best way to work? Might it be more efficient to do it another way? Are we well on the way to meeting our objectives, and if not, why not? At regular staff meetings for example, on a weekly or monthly basis it is good to set some work objectives and activities with time objectives and who is responsible for what, for the next week/month and discuss whether they were achieved or not at the next meeting. See an example of the outline for a work plan at annex E.

Output and outcome evaluation

The results of both output and outcome evaluations should contribute to evidence based decision making. This is particularly crucial for provincial and central levels of the Ministry of Health.

Evaluation at output level

At the output level, on an annual basis, the government and partners will jointly review the operational plans and budgets, their implementation and expenditures. Progress on major activities and the level of support channelled for implementation in terms of technical and financial assistance will also be monitored through the management health information system and the medium term expenditure framework. The monitoring and evaluation system will also weave in field audit activities on verifying service output indicators as well as expenditures according to plan activities. An important element will be discussing achievements and shortcomings with providers, managers and stakeholders at the field level to provide feedback and incorporate monitoring data into the planning and decision-making process.

At sector level, findings from monitoring and evaluation will be incorporated into further planning, decision-making and resource allocation decisions. The performance indicators and interpretations of the outcomes will be disseminated widely using existing structures such as the Annual Health Congress and the ministry's coordinating committee (CoCom) in order to facilitate joint decisions and strategic planning process in the health sector.

Overall, the working principle of the monitoring and evaluation process is based on linking indicators to implementation progress and financial allocations. The scale of activities includes developing a bottom-up system that brings in field level indicators to be compiled for a summary of progress at sector level. The following scope of work is envisaged:

- Routine monitoring through monthly, quarterly and annual reports on activities, plan outputs and expenditures from 2003 onwards

- Annual sector level performance reviews on outcome indicators and the implementation and expenditures of major activities
- Mid-term evaluation around 2005 to review strategic plan performance at the sector level
- Final evaluation through an overall sector review and a national level demographic and health survey to measure impact indicators in 2007.

Outcome evaluation

The overall outcomes of the strategic plan will be evaluated at the sector level through the following categories of indicators:

- Improvement in health outcomes including health status, healthy lifestyles and behaviour of the population, especially for women and children, with a special focus on the poor and other vulnerable groups.
- Reduction in the burden of health expenditures.
- A more effective and efficient health service

At the outcome level, the following groups of indicators will be monitored as corresponding to the 6 key areas of work:

- Access to, utilisation and coverage of health services especially among the poor and remote areas of the country
- Improvement in quality of health services in both public and private sectors
- Adoption of appropriate health seeking behaviour and healthy lifestyles among the population
- Improvement in responsiveness and skills of health providers sector-wide
- Wider interaction between providers and consumers at all levels
- Increased levels of funding to health service delivery
- Improvement in leadership and management capacity sector-wide at all levels

The outcomes and indicators based on the strategic plan framework are presented in the matrix at the end of this section. Where appropriate, utilisation and coverage indicators will be further disaggregated, to the extent permitted by data availability, by socio-economic status, urban/rural location, region and gender.

The mutually reinforcing links between ill health and poverty are a primary focus of this strategic plan. Many of its priority activities are explicitly targeted at poor households. Direct quantitative evidence as to the successful outcome of these activities - the extent to which the poor are benefiting - is therefore regarded as highly desirable. To the extent that poverty correlates with geographical location, regional and urban/rural differentiation will provide some indication. However, at the household or individual level, reliable methods for distinguishing between poor and non-poor are typically complex, time consuming and expensive. National socio-economic surveys that allow identification of poverty households, for example, may take at least a year to organize and implement, and another to analyse. They also provide limited information on morbidity and health care seeking behaviour for the minority of the sample who experience ill health. Health surveys, on the other hand, typically allow only a fairly crude asset-based approach to poverty which can be particularly problematic in terms of sub-national estimates.

Given these constraints, the combined use of the 2000 Cambodian demographic and health survey, the 1997, 1999 and 2002 socio-economic survey and the planned national health survey in 2002 should allow the development of poverty disaggregated baseline indicators. As further such surveys are undertaken during the period of the Strategic Plan 2003-2007, these will be used

to assess progress. Some additional evidence may be provided by service statistics or service delivery studies in terms of those provided with exemption or other forms of assistance.

Assessment of data generated for monitoring and evaluation

The monitoring and evaluation system facilitates each level of the health system to generate data that:

- Reflects the strategies and priorities identified in the health sector strategic plan
- Clearly adapts national level strategies and outcomes to annual targets and outputs that can be monitored and contribute to the successful achievement of national level outcomes
- Incorporates the sector wide approach by encouraging those in the private sector to regularly send in standardised data
- Reflects a joint process with all partners and other relevant stakeholders

Using criteria the Department of Planning, central level will assess the monitoring and evaluation data it receives, provide feedback to the relevant stakeholder and, if required, suggest changes.

Examples of assessment criteria:

- Does the data adequately reflect the national strategies and priorities?
- Is the data comprehensive in the sense that national programme activities and activities supported by partners are included?
- Are the objectives set annually in the operational plans measurable and have clear and realistic targets been set?

Evaluation of monitoring and evaluation framework

The ministry will regularly evaluate whether this framework is relevant, easily understood by implementers and useful. If changes are needed to the framework process new editions of this volume will be produced. The following are examples of a few of the management criteria that will be used to evaluate the framework:

- Is the monitoring and evaluation system user-friendly?
- Is the data being produced and used efficiently?
- Are the results really being incorporated into evaluation of national level outcomes and targets?

By the end of the strategic plan period the following outcomes are planned as part of the framework:

A revised health information system will have been developed and implemented

A computerised database linking the health management information system, personnel and essential drug supply information on individual health facilities will be available at central ministry and province levels. This database, maintained by the central level, will include a range of performance indicators at the facility, operating district and province levels. Copies of the database will be distributed annually on a CD-ROM to all provinces. Provincial officials will hold a workshop to present the information to operating district staff and facility managers.

Provincial and operating district staff will undertake routine management information system data validation/facility assessment exercises on a quarterly basis such that all facilities in each operating district are covered once per year. Computerised information from the resulting checklists will be maintained at operating district, province and central levels.

The monitoring and evaluation unit of the Department of Planning and Health Information will produce an annual health management information report. This will review the quality of the data in terms of both completeness and reliability, and provide current estimates of the outcome indicators derived from this source.

A series of customer opinion as well as knowledge, attitude and practice studies will have been implemented, analysed and results disseminated.

Provincial and operational district staff will have been trained in the design and implementation of rapid surveys focusing on specific issues relating to the strategic plan outcome indicators. With the support of the central level of the ministry, a series of such surveys will have been undertaken and the results, including estimates of plan indicators, published. The monitoring and evaluation plan would also weave in qualitative customer opinion surveys that describe preferences and opinions of quality, affordability and accessibility of health services particularly with reference to the poor and underserved.

Planning exercises at facility, operating district and provincial levels will routinely use information derived from the monitoring and evaluation system

Annual facility, operating district and provincial plan documents will be produced which demonstrate the use of health management information system and other relevant sources of information.

A national-level demographic and health survey will have been implemented, analysed and used for plan evaluation and to inform the design of strategies in the next planning cycle

The timing for the final evaluation survey is planned in 2006 in order for the results to be available for the design of the next strategic plan in 2007. It is anticipated that the survey design and instruments will largely draw upon the globally applied version of the Demographic and Health Survey.

ANNEX A.
GLOSSARY OF TERMS

Audit and Clinical audit

Audit is an investigation into whether an activity meets explicit standards, as defined by an auditing document, for the purpose of checking and/or improving the activity audited. Clinical audit is the systematic critical analysis of the quality of care, including the procedures for diagnosis and treatment, the use of resources, and the resulting outcome and quality of life for the patient.

Evaluation

Evaluation is attributing value to an intervention by gathering reliable and valid information about it in a systematic way, and by making comparisons, for the purposes of making more informed decisions or understanding causal mechanisms or general purposes.

Evidence-based decision making

This is fundamentally, the process of ensuring that the right questions are asked. Is an intervention safe and effective (will it do more good than harm)? Who needs it? Can it be provided under conditions of equal accessibility? Who is the population at risk and what are the relevant clinical and social determinants? What change may be expected in the burden of disease? What are the social consequences? If decisions are based on such comprehensive evidence then the budgetary issues that follow will be more accurately circumscribed.

Goal

An end that an organisation/agency strives to attain based on strategies and plans.

Health sector strategic plan

The Kingdom of Cambodia, Ministry of Health, health sector strategic plan is the direction and scope of work the sector wide during the period 2003 - 2007. The strategic plan helps answer the question 'how are we going to successfully achieve the policy statement'? It outlines how all stakeholders can contribute to improving and sustaining the health of the people of Cambodia. The strategic plan reflects strategic thinking, leadership, a wide consultative process, evidence based decision-making, and responsible management. In the strategic plan there is a goal and strategies for each of the six areas of work identified as priority if people's health is to be improved by 2007.

Indicators

Indicators are measures for checking on progress towards achieving outcomes. They can be quantitative and/or qualitative, have a time frame, and may highlight geographical and/or target groups. Indicators should relate to those aspects of care or organisational/management issues which can be altered by staff.

Monitoring

Continuous supervision of an action/activity, which compares the work to the strategic plan and/or annual operational actions for the purpose of checking whether plans and procedures are being followed and will contribute to the successful achievement of a desired outcome.

Outcomes

Outcomes are the real or visible effect of decision-making and practice. They should relate to crude rates of adverse events in the population (these give the best indication of the size of a health/disease problem) or when qualitative relate to issues that are system wide.

Targets

The targets in volume 1 of the strategic plan (in box 1a) are set for national level and are those parts of the population i.e. under fives, pregnant women, people aged 15-49 years of age (for HIV/AIDS control) or whole populations i.e. in malarial areas or where dengue is prevalent, which when implemented effectively and efficiently the strategic plan will have a major impact upon. The outcomes are also set for national level. At provincial level and for individual health facilities targets are set that will contribute to achieving the national level outcomes and targets.

ANNEX B.
ADDITIONAL COMPONENTS OF EXISTING INFORMATION SYSTEM

Pre-service training and continuing education reports

The Human Resource Department receives quarterly and annual reports from medical and nursing schools on enrolment and examination results. They also receive quarterly and annual reports prepared by provincial continuing education coordinators. These are submitted to the ministry through regional training centres. Following each major training course, i.e. minimum package of activities training or Foundation Health Centre training, the regional training centres review the curriculum and assess the effectiveness of the training and capacity of the trainers.
The findings are sent to the human resource department.

Integrated supervision checklists

A number of integrated supervision checklists have been developed and are in use:

- Checklist for operational district for health centre monthly supervision
- Checklist for provincial health department for referral hospital bi-monthly supervision
- Checklist for provincial health department for operational district bi-monthly supervision
- Checklist for central Ministry of Health for provincial health department bi-annual supervision

With exception of the central level supervision of provincial health departments, the above checklists are being used in the majority (if not all) provinces. It has been noted, however, that there are problems with the quality of the supervision visits, especially with regard problem identification and problem solving.

Inventory, Department of Budget and Finance

At all levels an inventory is kept to monitor the quantity (and in principle the quality) of land, buildings, furniture, equipment, and transport. Each level has to report annually by submitting an Inventory Form, which is used by the department to prepare an annual inventory report for the Ministry of Economy and Finance.

Health centre assessment, Ministry of Health 1998 - 2000

The health centre assessment was conducted in three consecutive years (1998-2000) and in a number of operational districts. The assessment consists of a questionnaire to be completed by health centres and includes questions regarding utilization and coverage, income from various sources (government, donors, and user fees) and staffing. Completed questionnaires were sent to the Ministry of Health, which was responsible for analyses of the data. Analyses for the years 1999 and 2000 data showed considerable problems with data accuracy and it proved difficult to make useful comparisons. Consequently, it was decided to review the usefulness of this tool and the assessment was not repeated in 2001.

Alert system/zero reports, Department of Communicable Disease Control

This routine reporting system monitors cases of cholera, dengue, AFP, and measles.
This is a crucial system for public health crises management. Zero-reports are sent weekly from facilities to the ODs, from the ODs to the PHDs, and from the provincial health department to the national level Department of Communicable Disease Control (CDC). The purpose of the alert system is disease surveillance and to facilitate an early response in case of a disease outbreak. At present there is concern that some facilities and ODs are not submitting reports on time and some of those submitted are incomplete.

Tuberculosis and leprosy programmes

The national Tuberculosis Programme conducts routine monitoring using data from facility registers. This is reported to the staff responsible for tuberculosis at operational district and provincial health department levels on a quarterly basis. The programme also maintains supervision checklists.
A tuberculosis prevalence survey is planned but it is not known when the results will be available or whether this survey will repeat on a regular basis.

MCH programme

The national immunization programme conducts active surveillance of respiratory infections, measles and neo-natal tetanus. A number of programme supervision checklists exist for the various MCH sub-programmes (EPI, birth spacing, nutrition, maternal and child health).

Ministry of Health planning manual

The planning manual of the ministry covers both the preparation of annual plans and methods for monitoring and evaluation at provincial health department and operational district level.
The manual advises monthly monitoring as part of routine monthly meetings as well as quarterly monitoring. Evaluation in the form of annual reviews is facilitated by inclusion of 36 indicators to assess provincial level health sector performance, most of which are also valid for use at operational district level. The planning manual (and related indicators) is presently under review. It is expected that a revised planning manual will be ready by October 2002.

Management capacity assessment tool

This tool was developed in 1998 and has gone through a number of revisions (no final version is available at present. It is essentially a checklist, which aims to assess the management capacity of provincial health departments by looking at 5 management functions: planning, implementation, human resource development, financial and drugs management, and monitoring and evaluation. The tool was developed within the context of World Health Organisation and UNICEF support to selected provinces in the form of Provincial Health Advisors. In this context, the tool has been used by the Ministry of Health/UNICEF to assess management capacity in supported as well as newly selected provinces. The ministry/WHO used this tool as part of the 1999 mid-term review and the year 2001 end-of-project evaluation of the health sector reform project, Phase III.

Although no final decision has been made, the Planning Department of the ministry has expressed the view that this tool is useful both for the purpose of self-assessment within provincial departments as well as for an external assessment of the management capacity of them by the central level.

In addition, there is a proposal to develop a similar tool to assess the management capacity of operational districts. The tool is presently under review and a revised version (possible also including a operational district version) is expected to be available by September this year.

Public investment programme (PIP) worksheet

The Ministry of Health is responsible for up-dating the health component of the public investment programme on an annual basis. The required information on recurrent costs and health investment costs (including donor funding and income from user fee schemes) is derived from the external aid database and from annual reports submitted by international organizations supporting the health sector. The finalised component is submitted each year (mid-year) to the Ministry of Planning.

External aid database, International Relations Office

This database contains information concerning projects implemented by international partners, and is up-dated as new information is received.

Drugs use and management monitoring checklist, Department of Essential Drugs

The department conducts quarterly monitoring on the management and use of drugs for inpatients in referral hospitals and for outpatients in health centres. Checklists are used to monitor drugs supply (drugs available/out-of stock), management of the pharmacy, drugs use (prescription practices), and use of drugs by the patient (does the patient have the correct information on how to use drugs that were prescribed). The data is entered in a database and is used to prepare the 6 monthly essential drugs progress report.

Consumption report on drugs and consumables

Every quarter operational districts and provincial health departments are to report on the consumption of drugs and consumables during the past 3 months. A database is maintained and information is used to report the consumption of drugs and consumables.

World Bank/ADB project coordination unit

The unit has been monitoring contracted and control operational districts on a quarterly basis. Field visits were conducted by the unit, with some participation of provincial health department staff. They covered a number of areas: resource management (staff, finances, etc.), selected quality aspects, and utilization and coverage. The monitoring visits included a field verification of reported data of the health information system.

Health financing schemes quarterly monitoring reports, Health Economics Task Force

This monitoring report is completed every quarter by all those facilities implementing an official health financing (user fee) scheme. The report was introduced in 1999 and has been used in its original form ever since. It covers income (from user fees and other sources), expenditure and some data on human resources and management. The Health Economics Task Force holds this information on a database.

ANNEX C.
MONITORNG AND EVALUATION MATRIX FOR BUDGET MANAGEMENT CENTRES

GOAL OF THE STRATEGIC PLAN	ACTIVITIES	OUTPUTS	INDICATOR	MEANS OF VERIFICATION
Enhance health sector development in order to improve the health of the people of Cambodia especially mothers and children, thereby contributing to poverty alleviation and socio-economic development.				
Strategies by key areas of work	**Activities**	**Outputs**	**Indicator**	**Means of verification**
Health service delivery: **A.** Further improve coverage and access to health services especially for the poor and other vulnerable groups through planning the location of health facilities and strengthening outreach services **B.** Strengthen the delivery of quality basic health services through health centres and outreach based upon minimum package of activities **C.** Strengthen the delivery of quality care, especially for obstetric and paediatric care, in all hospitals through measures such as the complementary package of activities **D.** Strengthen the management of cost-effective interventions to control communicable diseases				

E. Strengthen the management and coverage of support services such as laboratory, blood safety, referral, pharmaceuticals, equipment and other medical supplies and maintenance of facilities and transport **Behavioral change Communication** **F.** Change for the better the attitude of health providers sector-wide to effectively communicate with consumers especially regarding needs of the poor through sensitisation and building interpersonal communication skills **G.** Empower consumers especially women, to interact with other stakeholders in the development of quality health services through mass media and interpersonal communication **H.** Promote healthy lifestyles and appropriate health seeking behaviour through advocating for healthy environments, counselling, and implementing behavioural change activities **Quality improvement:** **I.** Introduce and develop a culture of quality in public health, service delivery and their management through the use of Ministry of health quality standards				

J. Develop and implement minimum and optimum quality standards for the public and private sectors incorporating pro-poor and gender issues through the use of appropriate tools **Human resource development** **K.** Increase the number of midwives through quality basic training and strengthen the capacity and skills of midwives already trained through quality continuing education **L.** Strengthen human resource planning to reduce mal-distribution of the numbers and type of workforce through identification of posts and the reallocation of staff. **M.** Enhance the management and technical skills and competence of all the Ministry of Health workforce through quality, comprehensive training and education and retention and support measures. **Health financing** **N.** Ensure regular and adequate flow of funds to the health sector especially for service delivery through advocacy to increase resources and strengthening financial management				

O. Allocate financial resources to improve the accessibility of health services for the poor through alternative health financing schemes **P.** Ensure transparent, efficient and effective health expenditures through strengthening resource allocation, co-ordination of different sources of funds and monitoring. **Institutional development:** **Q.** Organisational and management reform of structures, systems and procedures of the Ministry of Health to respond effectively to change **R.** Effective public private partnership to improve accessibility, quality and affordability through the promotion of private sector participation and enforcement of regulations. **S.** Enhance Ministry of Health capacity to address chronic and other non-communicable diseases and emerging public health problems through raising awareness and developing comprehensive plans.				

T. Further develop the health sector to strengthen management effectiveness throughout the health service by: 1. Enhancing management and leadership culture sector-wide 2. Increasing effective decentralisation and de-concentration 3. Institutionalising sector wide management				

ANNEX D.
NATIONAL LEVEL OUTCOMES, INDICATORS MEANS OF VERIFICATION FOR STRATEGIC PLAN 2003-2007

Goal of the strategic plan	Outcomes	Indicator*	Means of verification
Enhance health sector development in order to improve the health of the people of Cambodia especially mothers and children, thereby contributing to poverty alleviation and socio-economic development.	- Reduced infant mortality rate to 84/1000 lb*	- IMR	CDHS, NHS
	- Reduced under five mortality rate to 111/1000 lb	- U5MR	
	- Reduced maternal mortality ratio 305/100,000 lb	- MMR - TFR	CDHS, NHS, UNICEF reports
	- Reduced total fertility rate to 3.5	- % Children < 5 years malnourished	
	- Improved nutritional status among children and women: 31%	- % women 15-49 who are anaemic - % HIV/AIDS Sero prevalence among adult aged 15-49 years old	
	- Reduced HIV/AIDS Sero prevalence among adult 15-49: 2.1%	- Household expenditure on health care by poor/non-poor	CDHS/CSES
	- Reduced household health expenditure, especially among the poor	- Reduction in money with interest borrowed for health care expenditure	CDHS/CSES
		- Reduction in assets sold for health care expenditure	
	More effective and efficient health system	- Structural and organisational reform	Health sector review MoH Report

*See acronym list at the end of annex, lb: live births

Strategies by key areas of work	Outcomes	Indicator	Means of verification
Health service delivery:			
A. Further improve coverage and access to health services especially for the poor and other vulnerable groups through planning the location of health facilities and strengthening outreach services	- Improved access to health services delivery	- % Population with access to Health Centres that provide MPA services - % Referral hospitals that provide comprehensive referral services	PHD/OD reports, Census AR, SDS
B. Strengthen the delivery of quality basic health services through health centres and outreach based upon minimum package of activities	- Increased utilisation of preventive and curative services especially by the poor	- Per capita new consultations for curative care in public facilities Nb Contact/Inhabitant/Year - Urban areas: 0.9 - Rural areas:>0.5	SS/HIS, CDHS/NHS CSES
C. Strengthen the delivery of quality care, especially for obstetric and paediatric care, in all hospitals through measures such as the complementary package of activities	- Increased hospitalisation rate - Increase in % deliveries attended by trained health staff - Increase in rate of justified caesarean section rate - Increase in antenatal care consultations by trained health staff	- Number hospital admissions per 1,000 population by poor/non-poor - Increased delivery by trained health staff: to at least 60% - Caesarean Section : 2% - Proportion of complicated cases managed at essential obstetric care health facilities - Increase in anaemic prophylaxis rate among pregnant women - % Pregnant women who received at least 2 ANC consultations by trained health staff (2ANC > 50%)	SS/HIS CDHS/NHS SS, CDHS/NHS SS, CDHS/NHS SS, CDHS/NHS
	- Children under 1 year of age fully immunised - Increase in % women 15-49 years protected against tetanus during pregnancy - Increase in Contraceptive Prevalence Rate	- Children under 1 year of age fully immunised (BCG, OPV3, DPT3, Measles) at least 80% - TT2+ coverage for pregnant women at 90% CPR for modern methods for all women aged 15-49 years 35%	SS, CDHS/NHS NP, KAP

D. Strengthen the management of cost-effective interventions to control communicable diseases	- Reduction of incidence/prevalence rates of communicable diseases: - Regular delivery of cost effective interventions at facility levels	- Incidence of laboratory confirmed malaria - HIV sero-prevalence rate: women attending ANC - Pulmonary TB smear (+) case detection rate - Pulmonary TB smear (+) cure rate	NP NP AR, SDS
E. Strengthen the management and coverage of support services such as laboratory, blood safety, referral, pharmaceuticals, equipment and other medical supplies and maintenance of facilities and transport	- Increased availability of supplies and functioning equipment - Effective referral system	- % Facilities adequately stocked with essential drugs - % Facilities properly equipped & maintained - % Referral cases from health centres as % total new out-patient cases at referral hospital	AR, SDS SS, SDS
Behavioral change			
F. Change for the better the attitudes of health providers sector-wide to effectively communicate with consumers especially regarding needs of the poor through sensitisation and building interpersonal communication skills	- Appropriate health practices and healthy lifestyles as a result of informed decisions, especially by women	- % Population contacted by IEC activities - % Women with children <5: who can state: symptoms of malaria, dengue, ARI, and diarrhoea requiring treatment; and rules for home case management	KAP KAP CDHS/NHS