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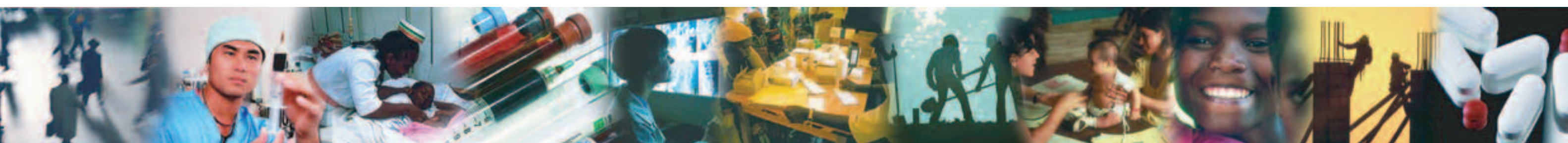
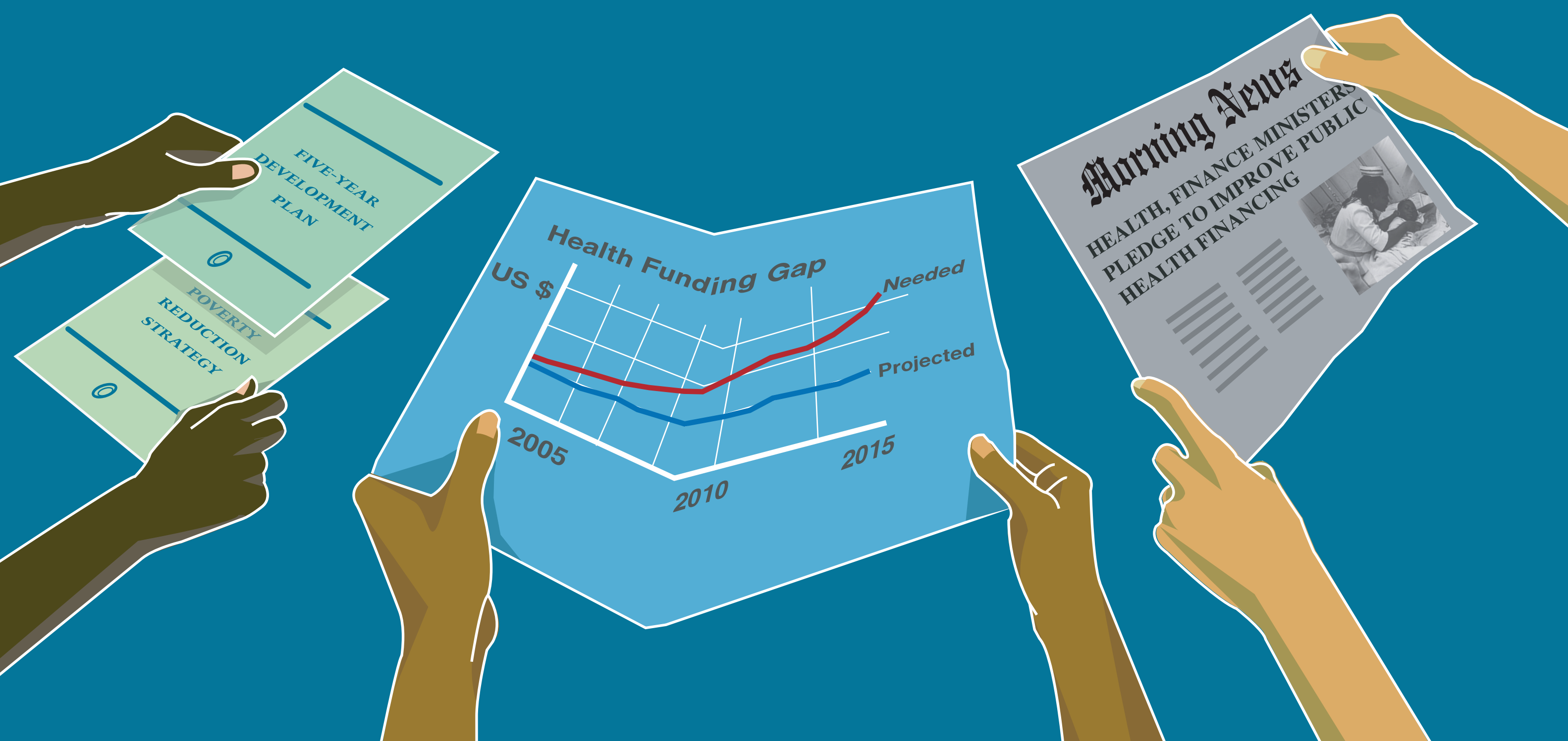


TOUGH CHOICES: INVESTING IN HEALTH FOR DEVELOPMENT

EXPERIENCES FROM NATIONAL FOLLOW-UP TO THE COMMISSION ON MACROECONOMICS AND HEALTH



Tough choices: investing in health for development

Experiences from national follow-up to the Commission on Macroeconomics and Health

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Electronic Annex F. Tough choices: investing in health for development. Experiences from national follow-up to the Commission on Macroeconomics and Health

In addition to the above, the following documents are available on the CMH website at www.who.int/macrohealth:

- CMH report (includes executive summary): Investing in health for economic development (2001)
- CMH Working Group 1 report: Health, economic growth and poverty reduction
- CMH Working Group 2 report: Global public goods for health

- CMH Working Group 3 report: Mobilization of domestic resources for health
- CMH Working Group 4 report: Health and the international economy
- CMH Working Group 5 report: Improving health outcomes of the poor
- CMH Working Group 6 report: International development assistance and health
- The CMH Working Group background reports
- Supporting global and country responses to the Commission on Macroeconomics and Health report
- Report and Declaration of the 2nd Consultation on Macroeconomics and Health, "Increasing investments in health outcomes for the poor"
- Pro-poor health reforms. Why, what and how? Paper prepared for the 2nd Consultation on Macroeconomics and Health
- Report and Consensus of the Asian Civil Society Conference on Macroeconomics and Health
- Reports of the macroeconomics and health regional meetings in Africa, the Eastern-Mediterranean, and South-East Asia
- National Commission on Macroeconomics and Health: the case of Sri Lanka. First lessons and framework for comparing progress between countries
- Malawi: What way forward? Situation analysis
- Situation analysis of Senegal
- Situation analysis of Nepal
- Links between macroeconomics and health: relevance to the South-East Asian Region.
- Mission report on estimating the resource needs for the health sector component of PARPA II in Mozambique
- Mozambique – elements for a health finance strategy (mission report – 2005)
- Investing in health for economic development in Viet Nam: report on opportunities and constraints for a national macroeconomics and health program

Foreword

Significantly reducing more than eight million preventable deaths per year and achieving more equitable health outcomes among the poorest populations require much greater political commitment for public health reforms and redirection of resources to prevent illness and save lives.

In many developing countries, progress towards this goal has been limited by the lack of comprehensive national health strategies, and insufficient capacity and resources to implement them. This is a critical deficit in the face of tough choices on allocation of limited resources among multiple health and development initiatives at country level.

Since the 2001 Report of the Commission on Macroeconomics and Health, a number of countries have set up multisectoral national commissions or similar bodies to review options, formulate a plan, and make detailed estimates of the costs of scaling up health investments and expanding access to essential health services.

This report presents country experiences in developing and shaping work to address long-term planning for the health sector. It identifies areas of action to which the national commissions have contributed, from mobilizing political will and building much-needed evidence, to strengthening national planning processes. These lay the groundwork for sustainable improvements in health for the world's poor people. The report clarifies the most intractable challenges that have impeded faster health progress, and gives concrete examples of how countries have started to address them through an integrated approach to health sector development and financing. This experience will be integrated into the core work of WHO, across the organization. It will contribute to global health and development discussions and help to guide the way forward for national policy-makers and development partners.

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Abbreviations

AIDS	acquired immunodeficiency syndrome
ARV	antiretroviral
BDN	basic development needs
CARICOM	Caribbean Community and Common Market
CCHD	Caribbean Commission on Health and Development
CGI	Consultative Group of Indonesia
CHPS	Community Health Planning and Services (Ghana)
CMH	Commission on Macroeconomics and Health
CBI	community-based initiative
CSO	civil society organization
CSPG	Cross-sectoral Planning Group (Ghana)
CTB	Cooperation Technique Belge
CVD	cardiovascular disease
DALY	disability adjusted life years
DOTS	directly observed therapy, short-course (TB therapy)
DPCG	Development Partners Coordination Group (Rwanda)
ECA	Eastern Europe and Central Asia
FDI	foreign direct investment
GAVI	Global Alliance for Vaccines and Immunization
GDP	gross domestic product
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
GMHI	Ghana Macroeconomics and Health Initiative
GPRS	Ghana Poverty Reduction Strategy
GNP	gross national product
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit (Germany)
HIV	human immunodeficiency virus
HSSP	Health Sector Strategic Plan (Rwanda)
IFF	international finance facility
IMCI	Integrated Management of Childhood Illness
IMF	International Monetary Fund
ITN	insecticide-treated bednets
MDG	Millennium Development Goal
MFA	Medical Financial Assistance (China)
MTEF	medium-term expenditure framework
NCD	noncommunicable disease
NCMH	national commission on macroeconomics and health (or similar mechanism)
NDPC	National Development Planning Commission (Ghana)
NHA	national health accounts
NHSS	National Health Services Survey (China)
ODA	official development assistance
OECD	Organisation for Economic Co-operation and Development
PNDS	Programme National de Développement Sanitaire (Senegal)
PRS(P)	poverty reduction strategy (paper)
RCMS	Rural Cooperative Medical Scheme (China)

SARS	severe acute respiratory syndrome
SWAp	sector-wide approach
TAG	Cambodia Macroeconomics and Health Technical Advisory Group
TB	tuberculosis
TFP	total factor productivity
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WHO	World Health Organization

Executive summary

Background

ttaining substantial health goals requires a break with business as usual. Approximately 40 countries chose to follow up on the findings from the 2001 report of the Commission on Macroeconomics and Health (CMH).

The CMH report provided evidence of the links between health and economic development, and emphasized that the poorest populations are disproportionately affected by preventable diseases and bear the brunt of the financial burden of illness. The Commission recommended a massive scale-up of health investments, accompanied by a critical review of the inefficiencies and malfunctioning of health systems.

The CMH also endorsed the oversight and coordination of these policy-analysis and planning activities by national commissions on macroeconomics and health (NCMHs). NCMHs were envisioned as multi-stakeholder mechanisms which were to be jointly headed by the minister of finance and the minister of health of each country.

Building on the CMH report, approximately 20 countries established NCMHs or used existing government bodies to strengthen – or, in some instances, to forge – a multisectoral approach to policy-reform and planning. The CMH report, however, did not fully indicate how its recommendations could be implemented at the national level, and so governments took it upon themselves to investigate the relevance to their countries.

Countries have identified priorities, established the costs for scaling up health investments, and identified options to fill the resource gap. The goal is an implementable national health investment plan. The CMH follow-up work did not seek primarily to provide guidance and support decision-making on specific technical issues. Rather, the work has aimed to strengthen capacity within countries for making decisions that impact on health, in particular through improving evidence, mobilizing political will, and heightening coordination among health and development actors.

In countries such as Ghana and India, the result has been a costed health plan that takes into account selected health-related sectors. Meanwhile, in China, Mexico, Sri Lanka, and the fifteen member states of the Caribbean Community, a targeted research agenda has been commissioned. This research agenda is building the evidence for national priority-setting, convincing policy-makers, and future planning.

Ultimately, there are several lessons that can be learnt from the choices that the countries have made in following up on the CMH report – not only in advocating for more funding for health, but also in developing a sequenced plan to make spending more efficient.

A favourable global environment for health and development

The national-level follow-up to the CMH report has taken advantage of the recent global drive to deliver long-overdue health improvements in developing countries. The Millennium Development

Goals (MDGs), adopted by all the United Nations Member States in 2000, are guiding efforts by developing countries and their partners. In addition, many countries are engaged in formulating and implementing poverty reduction strategies (PRSs).

Recent years have seen a global commitment to increase resources for health (especially in light of the emergent needs for controlling the global HIV/AIDS and other epidemics), both from domestic and external sources. The years since 2001 have also witnessed a renewed commitment by development partners to work more closely with countries to ensure harmonization, alignment, and country-ownership of aid objectives (i.e. Paris Declaration).

Preliminary evidence suggests that government spending in some countries and donor spending globally on health are increasing. Yet, a significant gap in resources for scaling up health interventions persists. It is imperative that countries develop effective strategies for health investments and make the most of partnership assurances.

Objectives of this report

This report aims to guide efforts of countries and their partners who are interested in a new approach to building evidence for policy, planning, and advocacy for scaling up essential health interventions. Sharing the CMH follow-up experiences since 2001 will be important for both the national decision-makers who are defining the health and development strategies in their countries and national technical staff who will translate the vision into reality.

The intent of this paper is not to debate or amend the ideology of the original CMH report, nor is it to evaluate the success of the countries in implementing the recommendations. In fact, it is not possible at this time to assess fully the impact of the work and draw general conclusions for two important reasons.

First, the work reflects early achievements of the countries involved. Second, this is a bottom-up initiative and so the priorities – and consequently the processes – in each country have been quite diverse. Accordingly, longer-term monitoring of investment plan implementation is needed to realistically assess policy changes and impact on health expenditures, health outcomes, or other development processes – i.e. PRS, medium-term expenditure framework (MTEF), sector-wide approach (SWAp).

Contributions of the CMH work in countries

The CMH work in countries has not applied a blueprint for solving health planning and management challenges. Rather, the activities in each country have focused on building national capacity to make better decisions within the country's own political and social contexts through strengthened research, information management, advocacy, and coordination of partners.

Several factors have been identified that have contributed to the impact and value of the country work. These include the following.

- Countries initiated, designed, and led the CMH follow-up. There is no 'one way' to approach the planning and advocacy needed for scale-up. Preservation of a 'bottom-up ' approach translates into very different targets and sequencing.

The desired result is that various health priorities are sufficiently reflected in health strategies, ongoing development processes are capitalized upon, and the interests of the poor are adequately represented.

Country-specific target-setting is a crucial step in increasing the effectiveness of resources for health, particularly as the MDGs are driving global and national agendas on health and development. The MDGs provide useful targets and benchmarks for progress and cross-country comparison. In addition, given their near-universal acceptance, they are an invaluable rallying point for global and national efforts.

While the MDGs certainly have reinvigorated health and development efforts, their achievement may not automatically result in health progress for the poorest. Moreover, they can impose standard, 'one-size-fits-all' targets without taking into account the tremendous diversity among and within countries. The work of the NCMHs emphasized building national capacity to focus health and development efforts on the poorest segments of the population and to adapt the targets to individual country health priorities.

- Coordination is needed to integrate health and development policies in the crowded field of externally-supported processes and initiatives. The NCMH mechanisms introduced such a framework by which PRSs, MTEFs, sectoral plans and budgets, and MDGs could be used in a comprehensive and strategic way. Health investment plans can be an effective implementation tool that ensures country management in this endeavour.

Currently, no single framework has provided a course of action for inserting a health perspective into PRSPs and other development initiatives, and no tool has been available to effectively link medium-term (i.e. MTEF) and short-term budgeting with well-developed sectoral and development strategies. A national coordinating mechanism – such as the NCMH – in countries can support the analytic and planning capacities to synergize these processes so that they clearly reflect health objectives. The investment plans can be used to align objectives of partners around national priorities, potentially strengthening the harmonization and country-ownership intentions of sector-wide approaches.

- The emphasis is not only on asking for more resources for health, but also on knowing how to best use the resources that are or will be available, building on existing national processes. To achieve this objective, the NCMHs or similar mechanisms have emphasized the following three areas of action.
  - enhance political support for increased health investments and positioning of health in development processes;
  - create comprehensive strategies and systems that better address the health of the poor; and
  - increase the effectiveness of development assistance for health.

Chapter 2 of this report describes in detail the initiatives taken at country level around these three areas. The countries presented are Cambodia, China, those of the Caribbean Community (Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, Saint Lucia, St. Kitts and Nevis, St. Vincent and the Grenadines, Suriname, and Trinidad and Tobago), Ghana, India, Indonesia, Mexico, Nepal, Senegal, Sri Lanka, Rwanda, and Yemen.

The NCMHs, by way of their mixed multisectoral composition, have provided an opportunity for directly linking evidence to high level policy-makers. The commissions have generated country-based research to convince donors and senior political leaders that large benefits can be gained from boosting health spending and from a strategy to boost allocative and distributive efficiencies. One offshoot of this involves an ongoing process of creating expert networks in regions and countries.

The analytical and planning framework acts as a capacity-building tool, readying the health sector for future external or internal events, which in turn allows current emergencies (i.e. HIV/AIDS) and future issues (e.g. the growing challenge of noncommunicable disease) to be dealt with in a systematic and coherent manner. The same process of building evidence, choosing good solutions, and then building a strong political base for action that a macroeconomics and health paradigm employs can work equally well for upcoming challenges.

Summary of policy implications

Against the background of the scale-up needed to meet the health MDGs and other national targets, together with the growing commitment to increase development aid coupled with debt relief, it is crucial to strengthen the capacity of health systems to absorb these funds effectively. Without a comprehensive strategy, such investments could fail to result in a higher level of health-service delivery to the poor. The ongoing work and the early achievements of the NCMHs have opened a door to build country capacity to make better resource allocation decisions through targeted research and coordination of partners.

Progress and challenges have been dependent on the ongoing political and social situation in each country and on the technical resources available for planning and analysis. But what has emerged consistently across countries are cross-cutting issues that need to be addressed for effective scale-up.

Presented in Table 1 are the issues that were common across the NCMHs in selected countries, together with selected examples of related data, information, and strategies amassed by those countries through this work.

Table 1 Country findings

Enhance political support for increased health investments and positioning of health in development processes	
Issues addressed through country work in macroeconomics and health	**Selected country findings**
Present evidence on health–development links	The Caribbean Commission on Health and Development (CCHD) was instituted to assist the Caribbean Community and Common Market (CARICOM) member countries in structuring their health and development agendas. The CCHD report presents initial findings on the aggregate returns for areas such as foreign direct investment (FDI), tourism, and trade that can be expected from health investments. For example, the CCHD report shows that a 1% increase in health expenditure could lead to a 3% increase in FDI in Trinidad and Tobago.

Strengthen development processes	The implementation of the Ghana Macroeconomics and Health Initiative (GMHI) recommendations depends largely on intersectoral collaboration involving key players in the health and other sectors. The main thrust for the GMHI is to harmonize selected national health-related priorities in the Ghana Poverty Reduction Strategy and to establish a multi-year strategy to expand coverage of essential health services.

Create comprehensive strategies and systems that better address the health of the poor

Issues addressed through country work in macroeconomics and health	Selected country findings
Set priorities for allocation of resources	The India NCMH undertook a comprehensive causal analysis by which a set of priority health conditions was identified that account for 80% of mortality in India. Three criteria in choosing priority health conditions were: ■ health condition disproportionately affects the poor; ■ the probability of health condition to impose serious burden in future years in the absence of interventions; and ■ the possibility of health condition driving large numbers of people into financial hardship.
Choose and cost interventions	As part of the United Nations Millennium Project, Yemen carried out an MDGs needs assessment and calculated the cost of achieving the MDGs by 2015 at US$ 53 per capita per year. In its report, the GMHI has indicated that Ghana will need between US$ 35–40 per capita expenditure on health to deliver priority interventions for the attainment of the MDGs. Total additional resources required are about US$ 5 billion over the period 2002–2015, whereas in India the NCMH called for a near tripling of the current health budget to provide basic health interventions.

Ensure the optimal quantity and quality of the health workforce	Another issue highlighted by the CCHD's report – and one that will have regional impact – is the problem of human resource management, especially the issue of migration of nurses. The report quotes a 35% vacancy rate for nurses alone, with an estimated loss of government revenue of US$ 16.7 million to train nurses at the basic level. The ministers of health in the region have already endorsed a programme of 'managed migration'. The Commission recommends the determination of the extent to which trade in nursing services and the permanent migration of nurses are symptomatic of deeper systemic considerations in the health sector and wider socioeconomic situation.
Target poor and rural populations	Over the last few years, China's macroeconomics and health work has focused on documenting the financial barriers to health care and the inequities of resource allocation. Progress in the health system has been uneven, with wide disparities in almost all aspects tied closely to income inequality between urban and rural areas, among regions and between income groups. For example, the social health insurance coverage rate for the top income group decreased slightly from 72.1% in 1993 to 70.3% in 2003, while that for the bottom group dropped from 36.7% to 12.3% over the same period. From China's national health accounts report, the medical care expenditure per capita was found to be four times higher for urban residents than for rural residents.
Finance health for the poor	The CMH in Mexico made the case for a universal health insurance scheme as the most appropriate option to ensure equity and efficiency in the health system. Over 50% of the population has no health insurance. Although the health system has public insurance programmes and plans for those without access to social security, coverage is limited and for the most part only basic health services are offered. The NCMH presents Mexico's successful *Oportunidades* programme to use direct cash transfers to facilitate delivery of health and education services to the poor.

Work with civil society organizations and the private sector	In Cambodia, MediCam (a non-profit umbrella organization comprising more than 100 members) worked in particular as the main civil society organization (CSO) interface with the Government in the macroeconomics and health process. Activities have included the preparation of a position paper on CSO involvement in the process, and various advocacy activities to ensure understanding and consensus among the Cambodian health sector CSOs. MediCam, as well as Care Cambodia, have also helped include a CSO component in the national research agenda.

Increase the effectiveness of development assistance for health

Issues addressed through country work in macroeconomics and health	Selected country findings
Increase the funding to reach targets in low-income countries	The Ghana Macroeconomics and Health Initiative (GMHI) findings are being used by the United Nations system to inform the assessment of the health component of the Millennium Project in Ghana. The report is also used as a reference in preparing the proposal for the United States Millennium Challenge Account which is making US$ 1 billion available to 16 pilot countries as of late 2005. The report will be used as part of donor meetings to discuss support for the Health Investment Plan and for 'fast-tracking' Ghana towards the health-MDGs, especially financing options. The report will also be used to discuss the health share of the recent US$ 4 billion debt relief to the country.
Align development assistance to national plans and budgets The issues revolve around the following challenges: – Distortion of country priorities – Continuity and predictability – Parallel arrangements and delivery structures – Financing recurrent costs	The Rwanda Task Force on Macroeconomics and Health participates in key fora at central and district levels where policy and development planning activities are conceptualized, developed and analysed. Among these fora are cluster groups created by donors and the Government of Rwanda to coordinate foreign aid, local government councils, and grassroots political organizations at the '*cellule*' level, which are responsible for determining local population priorities.

Finally, the policy and technical implications derived from the national follow-up processes highlight areas where efforts to strengthen country capacity and partner coordination are urgently needed (see Box 1).

Box 1 Overview of policy implications

Enhance political support for increased health investments and positioning of health in development processes

Positioning health in development. The aim of the ministry of health in this exercise is to secure a more central position for health in development planning and increased financial allocations to health in the national budget. Integration of health targets into poverty reduction strategies and medium-term and annual budgets is based on a comprehensive planning exercise and development of a health investment plan. The following components have been central to macroeconomics and health work in trying to achieve this objective.

- **Advocacy**. Facilitate opportunities for the health minister to negotiate with the finance ministry for more resources for the health sector and to back these demands with a plan for the use of funds.
- **Joint planning.** Create a platform for coordination and consensus building across mutually reliant sectors (with input from peripheral levels) and partners such as United Nations agencies, donors, and civil society – compatible with the Millennium Project's concept of an 'MDG Strategy Group'.
- **Assembling the evidence.** The ministry of health has an important role transferring knowledge from the health sector, indicating the costs to the economy of the main health problems affecting the country and economic benefits which would result from increased investments for health.
- **Investment plans.** Develop comprehensive health sector strategies that have the potential to link priority health expenditures with medium-term demands on budget resources (for example, by working through medium-term expenditure frameworks).

Create comprehensive strategies and systems that better address the health of the poor

Analysis and planning: the investment plan. Facilitate the national capacity to execute all components of comprehensive health-sector planning, including:

- needs assessment;
- consensus-building mechanism for target-setting;
- identification of package of basic interventions based on country profile;
- assessment of available resources and delivery capabilities;
- costing of delivery of interventions based on target scenarios;
- identification of financing options for resource gaps (public, external, risk sharing);
- development of a strategy for sequenced implementation of investment plan; and
- monitoring and evaluation of performance, by tracking flows of funds to the provincial and district levels, to capital or recurrent expenditures, and to target populations.

Identify target populations. Improve capacity to collect income-based disaggregated data on rural and urban poverty pockets and patterns of access and payment.

Maximize capacity to use existing tools. Many tools are being developed or are already available through the World Health Organization (WHO) and other organizations. Optimal integration into country analytic and planning processes could be strengthened through better-integrated technical partnerships between development organizations and national technical staff. The NCMHs in several countries have functioned to coordinate the use of existing tools in the development of an investment strategy or to commission studies where gaps were identified. Tools that were frequently identified by countries include: health sector reviews; needs assessment protocols; public health expenditure reviews; costing tools that are needs-based, appropriate for a package of interventions, and account for health system components; national health accounts; and the health metrics network.

Define the operational endpoints for monitoring and evaluation. Develop a set of indicators that monitor progress in resource management against nationally-established targets. The sole use of health outcomes is neither timely nor sensitive. There exists a need to develop measurable indicators, that can be reviewed on a periodic basis, to use as input to planning and budgeting. Such indicators should:

- reveal how much funding goes to various levels of care, and also reflect the geographic allocation of that funding;
- be sensitive to policy changes – not only expenditure data (time lag is important), but also more recent data on amounts budgeted for health, should be considered;
- draw from different kinds of data sources (such as surveys) to assess whether an increase of funding actually resulted in better access to health services for a specific group of the population; and
- increase the accountability of governments and donors for allocating health funds according to their targets.

Intersectoral engagement. Create a platform for coordination at the technical level, for joint planning and consensus-building across mutually-reliant sectors. Coordination is multi-faceted, to include all components of planning, and requires a mechanism in which planners across sectors can share knowledge and data and reach a consensus on needed investments – especially through the strengthening of the planning department of the ministry of health.

Human resources. Identify effective measures towards retaining health workers, and make specific proposals to the ministry of finance and the cabinet. The responsibility of the ministry of health is to develop the best possible staffing for the health-care delivery system, given the resources available to the ministry and the country's priority health problems.

Transfer and management of funds to the periphery. Improve transfer of funds for health from the central to the service-delivery level to reach poor rural populations – leakages of funds at various levels are common, as are delays in the release of funds to the periphery. In addition, improve district-level capacity to manage funds and implement health plans in line with national priorities – it is critical that lower-level management capacity be bolstered.

Financial protection. Build upon the continuing work of WHO and others to develop financing strategies that limit out-of-pocket health spending on essential health services, particularly by the poor. In most cases, this will require increased public spending on health.

Better engagement of CSOs and the private sector. Representation in the NCMHs in several countries has illustrated the importance of expanded collaborative efforts with civil society organizations and private sectors in planning, generating political support, participatory research, and improving access

to the most vulnerable groups. This requires creation of platforms for engagement and data sharing and strengthened capacity to regulate quality of care. CSOs have established strong ties to the community, and in developing countries a significant proportion of the poor are accessing the private sector for their health care.

Increase the effectiveness of development assistance for health

Track funding flows and targets. Create better and more timely data on the flow of external aid to the health sector. This monitoring should include funds that do not flow through the treasury (i.e. 'off-budget'). The data currently available are insufficient to monitor alignment to national priorities and impact on health system performance.

Alignment to national sectoral priorities. Create or strengthen existing mechanisms (e.g. SWAps) that facilitate the channelling of donor funds according to country priorities and strategies, while balancing the donors' need for monitoring performance and accountability.

The SWAp mechanism has not overcome all problems related to the donor–recipient relationship. While focused on the health sector, SWAp planning is not automatically linked to the budgeting process of the finance ministry, nor does it generate much of a local evidence base useful in making resource allocation decisions across various health investment options. Further, SWAps do not address the long-term sustainability and predictability of financing schemes.

Budgetary support. There is scope for action by donors in providing sustainable budget support and funding for recurrent costs (including human resources) in order to build national institutional capacity to supply public goods for health.

Introduction

Recent years have seen increased attention and commitment to health and development, and a recognition that developing countries and their partners need to find new ways of working together to achieve common goals. But even amid growing worry about the global security repercussions of ill-health and poverty – in addition to the concerns about such a grossly inequitable world – efforts to date have been insufficient to address the health resource gap. Realizing health goals requires a break with business as usual and the determination to address the fundamental factors that limit national capacity and keep countries from breaking the vicious circle of poverty and ill-health.

Background to the CMH follow-up

It was in this spirit that the World Health Organization was asked by countries to support in investigating in their national contexts the practical implications of the recommendations of the report of the Commission on Macroeconomics and Health, released in December 2001. Approximately 40 countries and several regions undertook national follow-up to the recommendations (see Table 2).

Table 2 Macroeconomics and health: participating countries, by WHO region

AFRICAN REGION	REGION OF THE AMERICAS	EUROPEAN REGION
Angola	Caribbean Community (Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, Saint Lucia, Saint Kitts and Nevis, Saint Vincent and the Grenadines, Suriname, and Trinidad and Tobago)[a]	Azerbaijan
Botswana	Mexico[a]	Estonia
Congo	Andean Region (Bolivia, Colombia, Ecuador, and Peru)	Kyrgyzstan
Ethiopia	MERCOSUR (Argentina, Brazil, Paraguay, and Uruguay)	**EASTERN MEDITERRANEAN REGION**
Ghana[a]	**SOUTH-EAST ASIA REGION**	Djibouti
Kenya	Bangladesh	Jordan
Malawi	India[a]	Iran
Mozambique	Indonesia[a]	Pakistan
Nigeria	Nepal[a]	Sudan
Rwanda[a]	Sri Lanka[a]	Yemen[a]
Senegal[a]	Thailand	**WESTERN PACIFIC REGION**
South Africa		Cambodia[a]
Uganda		China[a]
United Republic of Tanzania		Philippines
		Lao People's Democratic Republic
		Mongolia
		Papua New Guinea
		Viet Nam

All of the countries above expressed interest in the macroeconomics and health process and attended respective regional meetings and the 2nd Consultation on Macroeconomics and Health in 2003. Several of the countries have submitted work plans and budgets that were approved by WHO.

[a] Indicates countries that are highlighted in this report.

The 2001 CMH report provided evidence of the links between health and economic development, and emphasized that the poorest populations were disproportionately affected by preventable and curable diseases and bore the brunt of the financial burden of illness. The CMH recommended a massive scale-up of health investments, funded through a global partnership of the developing and developed countries, accompanied by a critical review of the inefficiencies and malfunctioning of health systems. The CMH also endorsed the oversight and coordination of policy-analysis and planning activities through national commissions on macroeconomics and health, multi-stakeholder mechanisms to be jointly headed by the minister of finance and minister of health.

The report, however, did not fully indicate how its recommendations could be implemented at the national level, and governments took it upon themselves to investigate the relevance to their countries. Two global consultations have been instrumental in establishing national processes to follow-up on the CMH recommendations (see Box 2). The CMH report was the point of departure from which the follow-up work has evolved, based on real country situations and needs.

Box 2 The macroeconomics and health consultations

In June 2002, the **1st Consultation on National Responses to the Report of the Commission on Macroeconomics and Health** was convened in Geneva. Representatives from ministries of health, finance, and planning from 20 countries came together to translate the recommendations of the CMH report into concrete actions. This consultation, along with high-level launches of the report in several countries, supported requests by governments to examine their health policies and financing to scale up health investments, systems, and interventions. The consultation positioned WHO, inter alia, to support the demand in countries. A series of consultations at the regional level provided countries the forum to share approaches and successes and strengthen commitment to the macroeconomics and health process.

The **2nd Consultation on Macroeconomics and Health – Increasing Investments in Health Outcomes for the Poor** (Geneva, October 2003) furthered the momentum of the countries. Discussion among ministers of health, planning and finance, bilateral and multilateral partners, and financing institutions contributed to further focus macroeconomics and health work on improving access to health care and on innovative solutions to address the obstacles that hinder efficient use of financial resources. As expressed in the meeting Declaration, countries identified resource mobilization options, human resource constraints, and the harmonization of donor funding as key issues *(1)*.

In most countries, a national commission on macroeconomics and health – or a similar governmental coordinating body – has established options and estimated costs for scaling up health investments and sequencing reforms, in order to achieve more equitable and better health outcomes. An important objective of this work is the preparation of an implementable national health investment plan. While efforts at the country level have taken different directions depending on the specific characteristics of each country, the core methodology (see Box 3) and central motivation of the work has been very similar:

- ensuring **better health outcomes for poor people**,
- mobilizing much **more money for public health**, and
- **increasing the effectiveness** of health investments.

The work in countries has contributed to strengthening the stewardship role of the government[2], and particularly of the ministry of health. The work focused on the complex pathways by which

2 See *The world health report 2000 – health systems: improving performance* (Geneva, World Health Organization, 2000) for more information about the stewardship role of government.

resource inputs are mobilized and translated into health outcomes. In most cases, the challenges that constrain national progress towards global and national health goals are 'upstream' – limited spending on human development; insufficient and fragmented external support, that is not aligned with country plans and priorities; poorly-developed health policies; and weak institutions. The CMH follow-up work did not seek primarily to provide guidance and support decision-making on specific technical issues. Rather, it has aimed to strengthen capacity within countries for making the range of decisions that impact on health – in particular through improving evidence, mobilizing political will, and heightening coordination among health and development actors.

Box 3 Methodology of macroeconomics and health work in countries

Initiated and led by governments, the macroeconomics and health processes have reflected the specific opportunities and constraints faced in each country's health, economic, social, and political environment. Based on country experiences, three basic phases were identified that offer a sequenced approach to achieving essential objectives.

Phase 1 covers initial national familiarization with the CMH report and analysis of its relevance and applicability to the country reality. During this phase, countries establish an interministerial mechanism (or decide to use an existing mechanism) that focuses on increasing and improving health investments for poverty reduction and economic development, in particular through more effective advocacy and building of evidence.

During **Phase 2**, countries develop a long-term health investment plan based on situational and costing assessments. Sustaining cross-sectoral commitment and defining an implementation strategy for the plan are part of this phase.

Phase 3 covers implementation of the activities defined in the investment plan, including filling the funding gaps with increased domestic and donor resources, and monitoring and evaluation of the process.

At all levels, WHO facilitates country access to technical and financial support and plays a role in bringing a wide range of stakeholders together around the macroeconomics and health process.

A favourable global environment for health and development

An unprecedented opportunity exists to deliver long-overdue health improvements in developing countries and to build on lessons learnt from previous initiatives and movements. The Millennium Development Goals (MDGs), adopted by all the United Nations Member States in 2000, are guiding efforts by developing countries and their partners. In addition, many countries are engaged in formulating and implementing poverty reduction strategy papers (PRSPs) which are becoming more aligned with health-sector strategies.

Recent years have also seen a global promise to increase domestic and particularly external resources for health (especially in light of the emergent needs for controlling the global HIV/AIDS and other epidemics) and a renewed commitment by development partners to work more closely with countries to ensure harmonization, alignment, and country ownership of aid objectives (i.e. Paris Declaration). Preliminary evidence suggests that government spending in some countries – and donor spending globally – on health are increasing. The overall increase of money available for health has presented an imperative for countries to develop effective strategies for health investments, including ensuring resources reach the district and community levels, and to make the most of partnership assurances.

Promising increases in domestic commitments

Low health spending – financed heavily through out-of-pocket payments – is the reality in many low- and middle-income countries. However, trends in health spending in recent years paint a slightly rosier picture. In some countries, there has been an increase in general government expenditure on health between the years 1998 and 2002. Increased public spending on health is crucial for reducing out-of-pocket payments for poor people.

Table 3 shows that total expenditure on health as a percentage of GDP and general government expenditure on health as a percentage of GDP have generally increased in this sample of countries in which CMH follow-up has been active. Moreover, Table 3 indicates how changes in the share of external resources for health have contributed to these trends in some countries.

Table 3 Trends of health expenditures as % of GDP in 1998 as compared to 2002, in selected countries

Country	Total expenditure on health[a] as % of GDP		General government expenditure on health[b] as % of GDP		External resources for health[c] as % of GDP	
	1998	2002	1998	2002	1998	2002
China	4.8	5.8	1.9	2.0	0.0	0.0
Ghana	5.5	5.6	2.3	2.3	0.3	1.0
India	5.2	6.1	1.4	1.3	0.1	0.1
Indonesia	2.5	3.2	0.7	1.2	0.2	0.1
Mexico	5.4	6.1	2.5	2.8	0.1	0.1
Senegal	4.2	5.1	1.6	2.3	0.6	0.9
Sri Lanka	3.4	3.7	1.7	1.8	0.1	0.1
Yemen	4.9	3.7	1.7	1.0	0.4	0.1

[a] Total expenditure on health is the sum of general government and private expenditures.
[b] General government expenditure on health is the sum of domestic and external resources.
[c] External resources includes all external resources whether passing through governments or private entities.
Source: National health accounts, WHO, 2005.

Moreover, in recent years a number of countries have made pledges – which are not yet reflected in budgets – to augment public health spending. Since 2002, several countries have expressed their commitment to increase expenditures for the health sector, as in the following examples.

- The Government of India has exhibited a pro-poor and health focus. The National Health Policy 2002 has called for enhanced funding (specifically, a doubling of public health expenditures to 2.0% of GDP) and an organizational restructuring of the national public health initiatives *(2)*.
- Sri Lanka has also pledged to almost double its current level of health spending over the next five years *(3)*.
- China has expressed a commitment to decrease inequities in health through stronger rural health programmes and primary care funding[3].
- The government of Senegal has pledged to increase its health budget by annual increments of 0.5% *(4)*.
- Yemen has increased public expenditure for health as share of GDP from 1.46% in 1999 to 1.62% in 2003 (A. Fairbank, unpublished data, 2005)[4] .

3 *China: Health, poverty and economic development.* Office of the WHO Representative in China/Social Development Department of China State Council Development Research Centre, forthcoming.
4 Fairbank A. *Public expenditure review: health Sector, Republic of Yemen 1999-2003,* unpublished data, 2005.

Increases in external resources

A closer look at recent commitments of development partners to increased aid and debt relief shows that external funds for health are on the rise. For instance, in 2005, the European Union announced that its members would double their aid to poor countries by 2015 *(5)*. Total commitments to development assistance for health increased from about US$ 7 billion to US$ 10.7 billion between 2000 and 2003. Pledges from donors to provide funds needed to reach the health MDGs is the major driving force – explaining trends in development assistance for health since 2000, as the bulk of the new money supports HIV/AIDS, malaria, and tuberculosis (C. Michaud, unpublished data, 2005)[5].

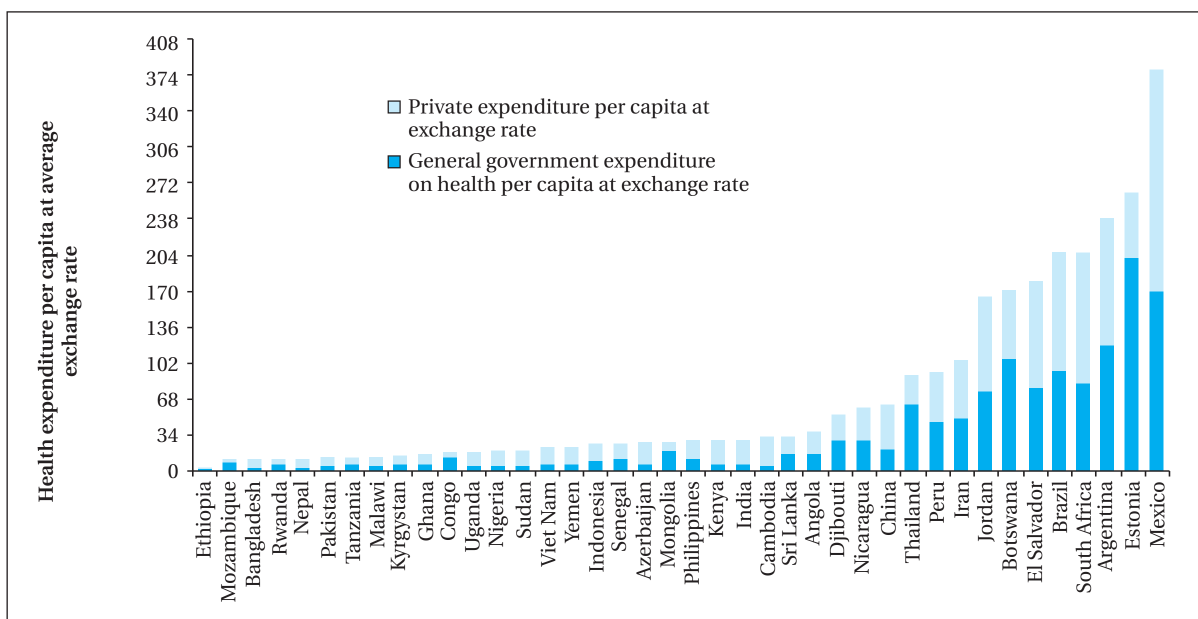
The increase in bilateral commitments has been largely driven by the United States Agency for International Development, which doubled its commitments between 2000 and 2003, thus adding US$ 1 billion to development assistance for health. The Global Fund to Fight AIDS, Tuberculosis, and Malaria (GFATM) and the Global Alliance for Vaccines and Immunization (GAVI) made total commitments of approximately US$ 1 billion in 2003 and 2004. In June 2005, G8 finance ministers announced a broad-based deal on debt relief under which the World Bank, the International Monetary Fund and the African Development Fund will immediately write off all of the money owed to them by 18 countries – approximately US$ 40 billion *(6)*.

Such commitment raises expectations that additional public resources will be available for health and poverty reduction. However, issues such as donor flexibility, timeliness, alignment and harmonization, including an emphasis on the need for assistance in the form of budget support, continue to be important concerns for countries.

The health financing gap remains

The Commission on Macroeconomics and Health calculated that health expenditures of at least US$ 34 per person per year by 2007 (and US$ 38 by 2015) would be necessary to provide a package of essential health interventions *(7)*. Figure 1 demonstrates that in 25 of the 40 countries, total health spending fell below this level in 2002.

Figure 1 Health expenditure per capita at average exchange rate (US$) in 40 countries, 2002



Source: National health accounts, WHO, 2005.

5 Michaud C. Trends in development assistance to the health sector 2000-2004. Geneva, World Health Organization, unpublished data , 2005.

In addition, the CMH report states that most of the suggested minimum expenditure will have to come through public outlays to cover public goods where individuals lack the incentive on their own to take the necessary protective actions and to ensure access for the poor, who lack adequate household funding *(7)*.

The lack of funding for health seems particularly worrisome since countries which were under-funded, according to CMH estimates, are facing demanding health challenges. Many countries are progressing too slowly to reach their national targets by 2015, and some countries even show increases in under-five mortality. In addition, maternal mortality was substantially higher in countries that spent less than US$ 34 per capita. In 2000, maternal mortality rates per 100 000 live births averaged 372 for the 25 countries which spent less than US$ 34 per capita in 2002 compared to 126 for the 15 countries which spent more or equal to US$ 34 per capita in 2002. Although massive increases in funds for health may not be forthcoming, there nevertheless persists the imperative to accelerate resource mobilization from both public domestic and external resources.

As seen in Figure 1, countries such as Cambodia, China and Mexico are all spending as much as, or more than, the estimated minimum level necessary to provide a set of essential health interventions. However, large numbers of people in these countries lack access to basic care and health indicators remain poor. Thus, an increase in the resources for health may not have a significant impact on health outcomes if not accompanied by reallocation to more effective uses.

A close tracking of the flow of health expenditure could reveal whether an apparently low impact of spending on health outcomes can be attributed to inefficiencies in their allocation and possibly pinpoint where these are. This requires institutionalizing national health accounts, including the tracking of expenditure at subnational level for population subgroups. A precise picture of existing inefficiencies could then serve as a baseline for defining targets for reallocation and for assessing the impact of related policy measures.

Objectives of this report

This report will describe the experiences since 2001 as approximately 40 countries have requested and initiated follow-up to the CMH recommendations. A number of these countries have shaped multisectoral processes towards developing a strategy for scaling up investments for health, costing this strategy, and using the outcomes to influence policy-makers and political leaders in the health, finance, planning, and other ministries.

Though the report focuses on 12 countries in which the process resulted in substantial products and activities, it offers lessons that can be extrapolated to other national situations. It aims thus to guide efforts of countries and their partners who are interested in a new approach to building evidence for policy, planning, and advocacy. It is believed that sharing the CMH follow-up experiences will be valuable for both the national decision-makers who are defining the health and development strategies in their countries and also for national technical staff who will translate the vision into reality.

The intent of this document is not to debate or amend the ideology of the original CMH report, nor is it to evaluate the success of the countries in implementing the recommendations. In fact, it is not possible at this time to assess fully the impact of the work and draw general conclusions for two important reasons.

First, the work reflects early achievements of the countries involved. Second, this is a bottom-up initiative and so the priorities – and consequently the processes – in each country have been quite

diverse. Accordingly, longer-term monitoring of investment plan implementation is needed to realistically assess policy changes and impact on health expenditures, health outcomes, or other development processes, i.e. PRS, MTEF, SWAp.

The value of CMH work at the country level

The experiences from countries present fresh approaches in the pursuit of stronger national planning for scaling up essential health interventions. Several factors have been identified that have contributed to the impact of CMH work at country level. These are summarized below and described in more detail in Chapter 1.

- Countries initiated, designed and led the CMH follow-up. There is no 'one way' to approach the planning and advocacy needed for scale-up. Preservation of a 'bottom-up ' approach translates into very different priorities, sequencing, and capacity needs.

- Coordination is needed to integrate health and development policies in the crowded field of externally-supported processes and initiatives. The NCMH mechanisms introduced such a framework by which PRSPs, MTEFs, sectoral plans and budgets, and MDGs could be used in a comprehensive and strategic way. The health investment plans can be an effective implementation tool that ensures country management in this endeavour.

- The emphasis is not only on asking for more resources for health but on planning how to best use the resources that are or will be available, building on unique national characteristics. To do this the NCMH or similar mechanisms have emphasized three areas of action, to:
  - enhance political support and build cross-sectoral coordination for increased health investments and positioning of health in development processes;
  - create comprehensive strategies and systems that better address the health of the poor; and
  - increase the effectiveness of development assistance for health.

Outline of report chapters

Chapter 1 will present in more detail the broad characteristics (presented above) of the national processes that were found to be essential to move forward the political will and technical planning for scaling up health investments. Then, Chapter 2 describes the areas of work of NCMH that were similar across countries, before presenting the diversity in implementation strategies that were dependent on each country's unique social, political, and economic situations. Finally, Chapter 3 extrapolates from the country experiences to propose a 'policy framework' to ministries of health and their partners. This policy framework involves the measures to be adopted urgently for achieving priority national health objectives.

Chapter 1 Overview of national CMH work

This chapter will introduce the work which countries undertook to operationalize the CMH recommendations and describe in more detail the main features of the experiences in countries. It is structured around a bottom-up approach, the opportunity to coordinate health and development processes, and evidence-building for planning and advocacy.

Building on country ownership and specificity

The national follow-up was innovative in that countries drove and defined the process, enhancing the impact of the work of the NCMHs. The desired result is that various health priorities are sufficiently reflected in health strategies, ongoing development processes (e.g. poverty reduction strategies) are capitalized upon and the interests of the poor are adequately represented.

Country-specific target-setting is a crucial step in increasing the effectiveness of resources for health, particularly as the MDGs are driving global and national agendas on health and development. The MDGs address health conditions that largely afflict the poor, and they provide useful targets and benchmarks for progress and cross-country comparison. In addition, given their near-universal acceptance, they are an invaluable rallying point for global and national efforts. In this sense, the targets serve an important advocacy function. They take a holistic view of poverty and recognize the interdependence of improvements in areas like health, education, and the environment.

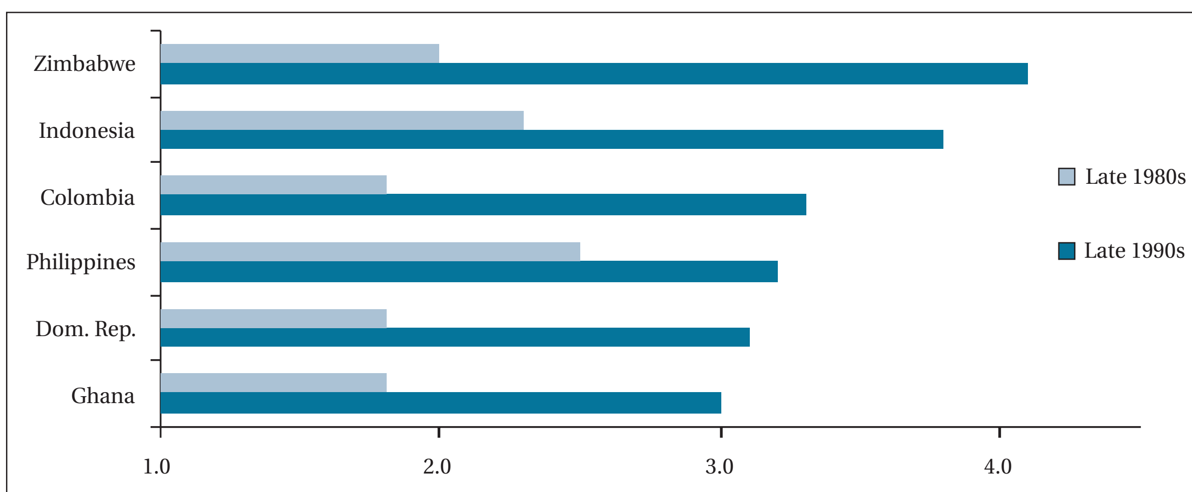
While the Goals are certainly a welcome contribution and have reinvigorated health and development efforts, their achievement may not result in health progress for the poorest, and they can impose standard, 'one-size-fits-all' targets without taking into account the tremendous diversity among countries. The work of the NCMHs emphasized the facilitation of national capacity to focus health and development efforts on the poorest segments of the population and to adapt the targets to individual country health priorities.

Ensuring a focus on the poor and other vulnerable groups

The MDGs are stated in terms of national aggregates, which can hide important disparities in health status among different population groups. Some of the health MDGs could be met without improving the health status of the poorest *(8)*, who are often the hardest to reach, and in fact progress is often slowest among the disadvantaged people. Especially in middle-income countries, large poverty pockets persist and income inequalities are widening. China has already achieved several of the MDGs and is on track to reach all of them by 2015. However, in 2000, about 200 million Chinese still lived on less than US$ 1 a day and 600 million lived on less than US$ 2 a day *(9)*. These poverty pockets are a threat to political and social stability and often give rise to migration towards urban areas, the breakdown of rural structures, and stress on urban infrastructure.

To see how progress vis-à-vis the health targets has been achieved disproportionately among the better off, under-five child mortality is taken as an example. Figure 2 demonstrates that – for a sample of countries between the late 1980s and the late 1990s – disparities across wealth groups widened in all of them *(10)*. Such disparities emphasize the need for recent disaggregated data in order to assess whether disadvantaged groups are bypassed by 'average' progress towards the MDGs.

Figure 2 Under-five mortality by wealth group in selected countries
(ratio of average under-five mortality for bottom/top quintile)



Source: By permission of the publisher, from Vandemoortele (10).

Adapting the MDGs to country health priorities

The health MDGs establish a set of health targets and indicators which provide a useful measure for progress in some countries, but do not reflect all of the health priorities of developing countries. The MDGs cover a major proportion of the health conditions that are responsible for avoidable mortality in low- and lower-middle-income countries. However, the MDGs make no mention of (for example) noncommunicable diseases (NCDs) and lifestyle risk factors (see Box 4).

Moreover, some of the MDG targets may not be relevant in all countries – as for example the malaria target for the European region. In some countries, it is not the nature of the targets – but rather their magnitude – that may be inappropriate. Some countries on track to meet the MDG targets – such as Malaysia and Thailand – have established more ambitious targets related to quality of life, educational attainment, and health outcomes *(11)*[6].

A national commission on macroeconomics and health – or a similar mechanism – can contribute to the critical analysis of the appropriateness of the MDG targets to the country situation, and adapt the targets as necessary. This report thus endorses an active moulding of the health MDGs to country situations.

Box 4 The rise of noncommunicable diseases

Chronic (or noncommunicable) diseases such as cardiovascular disease and diabetes account for 60% of deaths worldwide. With the exception of Africa, chronic diseases kill and disable more people than HIV/AIDS, tuberculosis, and malaria – which are singled out for special attention by the Millennium Development Goals (MDGs).

Putting pay to the misconception that chronic diseases affect primarily the affluent, cardiovascular disease (CVD) has become the leading cause of death in some developing countries – 80% of the deaths from CVD and 87% of CVD-related disability occur in low- or middle-income countries *(12)*. By 2020, 70% of the 10 million deaths due to tobacco each year will occur in developing countries.

6 For data and information on NCDs also consult the report *Preventing chronic diseases: a vital investment*. Geneva, World Health Organization, 2005 (http://www.who.int/chp/chronic_disease_report/en/).

Chronic diseases are sometimes – and erroneously – dismissed as affecting only those of retirement age and, therefore as having only a limited impact on the economy. However, a substantial share of the mortality due to chronic disease will in future fall on those of prime working age. Increased morbidity will also reduce productivity and limit individuals' capacity to participate in the labour force. Coping mechanisms – such as removing young girls from education to care for a sick family member – should also be factored into the cost.

The costs are already staggeringly high. In the United States, the American Diabetes Association estimated the direct cost of diabetes in 2002 to be US$ 92 billion (up from US$ 44 billion in 1997). In Mexico, the total cost of diabetes (including indirect costs) is estimated at US$ 320 million for 2005 (a 25% increase in three years). Failure to address the risk factors will see this escalation in costs continue.

The problem is becoming more acute, as behavioural change drills down into developing societies. The poorest groups in society are particularly susceptible to risk factors such as poor nutrition, sedentary lifestyles, and tobacco use, as they cannot afford to make the more expensive purchases necessary for long-term health.

The increase of NCDs in developing countries calls for prompt implementation of preventive strategies, targeted at those most at risk, in addition to clinical care and lifestyle help for those who are already presenting symptoms of the diseases. Although not part of the MDGs, NCDs are a clear example of targets which many countries need to include when formulating health sector strategies.

Source: Adapted from *Chronic disease: the call to action*, contributed by the Oxford Health Alliance, July 2005 (see Annex 2).

Coordinating among a crowded field of health and development initiatives

A number of reports have been released in recent months, diagnosing the constraints at country level to achieving the health MDGs and other health targets. One of these, the United Nations Millennium Project report *Investing in development: a practical plan to achieve the Millennium Development Goals*, recommends that developing countries adopt and implement national development strategies ambitious enough to reach the Goals, and that donors provide all the support needed. The report discusses the need to make current processes "truly MDG-oriented", and recommends that these processes be transparent and inclusive *(13)*. The report's bold approach and its emphasis on the need to treat the MDGs not as "abstract ambitions, but as practical policy objectives", are welcome.

However, the report's recommendations do not acknowledge the challenges posed by complex political and institutional structures in countries, and they lack concrete suggestions for how an MDG-based poverty reduction strategy would be operationalized. Institutionalizing such a process is a considerable undertaking, and requires a gradual building-up of national capacity. The reality in countries is that many sectors compete for limited resources, and policy-makers face difficult choices in determining priorities. An institutional legacy of competition impedes necessary cooperation among central and line ministries on implementation of policies and plans.

Another recent report, that of the Commission for Africa, calls attention to the need for improved national capacity and more accountability, and makes specific recommendations for donors and countries to work better together towards strengthening health systems *(14)*. Again, while the report offers a good diagnosis of the issues, such as lack of sufficient health workers, it does not sufficiently tackle the country implementation. Likewise, important issues are raised by M. Foster in his 2004

(unpublished) report describing country-level constraints to achievement of the health MDGs, and by other publications[7]. The CMH follow-up work described in this report complements previous efforts by presenting best practices, gleaned through real country experience, for a new way of managing health resources.

Currently, no single framework has provided an evidence-based course of action for inserting a health perspective into PRSPs and other development initiatives *(15)* and no tool has been available to effectively link medium-term (i.e. MTEF) and short-term budgeting with well-developed sectoral and development strategies (M. Foster, unpublished data, 2004)[8]. A national coordinating mechanism in countries, such as the NCMH, can support the analytic and planning capacities to synergize these processes so that they clearly reflect health objectives. The investment strategies can be used to align objectives of partners around national priorities, potentially strengthening the harmonization and country-ownership intentions of sector-wide approaches (SWAps)[9].

Planning the best possible use of resources

In the context of country diversity and amplified health initiatives, how can each country make the most of available resources for health? In addition to a coordinating role, the NCMHs have contributed to the evidence-base for planning. Once countries have customized the targets, they need to plan, finance, and implement an appropriate health strategy, taking into account the cross-sectoral interaction of risk factors for disease as well as how to integrate new investments into ongoing health arrangements.

Allocating available resources more efficiently

The current global drive for increased resources for health underscores the urgency of strengthening national capacity to plan for the best use and absorption of resources for health. In the shadow of the effort and cost that it will take to control the HIV/AIDS and other epidemics, as well as the growing burden of noncommunicable disease and the health issues of ageing populations, there is an imperative to demonstrate that increases in funding result in improved health outcomes among those most in need. In addition, improved national capacity is a basis for donor alignment around national plans and strategies, which will heighten the effectiveness of aid.

To effectively absorb funding and to achieve maximal health improvements with limited funds, efforts must be undertaken to increase their efficient use. As seen in Figure 1, countries such as Cambodia, China and Mexico are all spending approximately as much as – or more than – the estimated minimum level necessary to provide a set of essential health interventions.

However, large numbers of people in these countries lack – for various reasons – access to basic care, and health indicators remain poor. Even Sri Lanka, which has a history of effective primary health care and good health indicators in a resource-scarce setting, will have to plan strategically to maintain this level of access and care. Crucially, a significant impact on health outcomes will not be achieved if public funds are not reallocated in such a way as to alleviate the burden of out-of-pocket fees.

Building evidence for advocacy, planning, and harmonization

The NCMHs serve as examples of how country efforts have led to advocacy for increased health investments and targeting the scale-up of pro-poor interventions. The functions that are imperative for success can be distilled into three broad areas for capacity building, which:

7 Foster M. *Lessons from country experience in implementing the health related Millennium Development Goals: synthesis report.* Geneva, World Health Organization, unpublished data , 2004.

8 Ibid.

9 SWAps seek a government-led process to unite all relevant policies and expenditures of a particular sector, such as health, in a comprehensive and coordinated manner. The idea behind the SWAps is that sectoral goals can be better achieved if development assistance is used to support nationally defined sectoral policies and strategies, rather than specific projects.

- enhance political support for increased health investments and positioning of health in development processes;
- create comprehensive strategies and systems that better address the health of the poor; and
- increase the effectiveness of development assistance for health.

The NCMHs, by way of their mixed multisectoral political and technical composition, have provided an opportunity for directly linking technical planning to high-level policy-makers. They have generated country-based research to convince donors and senior political leaders of the large benefits gained from boosting health spending and of a strategy to boost allocative and distributive efficiencies of resource management.

One offshoot of this is an ongoing process of creating expert networks in regions and countries. Global and regional experts work with local colleagues to provide technical assistance in the areas of policy development and resource planning.

The country work has added significantly to and compiled the evidence to make the case for increased and better health spending in a country context (Box 5). However, to move ahead, a system of defining indicators and milestones and data collection needs to be strengthened. Such a system should monitor implementation of investment plans and provide feedback to short-term planning and budgeting cycles.

This system should include training for policy-makers and programme managers in how to optimize the use of these indicators. Such indicators serve not only as a basis for channelling health investments to their most effective use, but also as intermediate indicators to continuously monitor the impact of reforms on the accessibility of health services for the poor.

Box 5 Country-specific evidence of the health–development link

- The **Caribbean Commission** on Health and Development preliminary findings suggest that in the case of Trinidad and Tobago, a 1% increase in health expenditure is expected to lead to a 3% increase in foreign direct investment flows, with a lag period of about two years. In Barbados, a 1% increase in health expenditure would lead to a 1.1% increase in tourist expenditure and a 0.8% increase in tourist arrivals. In a region with a high dependence of many of the economies on foreign direct investment and tourism, these were considered important links to establish *(16)*.
- In **China**, a study found that over the next 15 years, total factor productivity – to which the health of workers contributes – will play an increasingly important role to sustain high economic growth. In addition, the health sector takes a growing share of GDP and helps promote employment, while health financial protection programmes help reduce household incentive to save and boost China's low consumption rates[10].
- It is estimated that **Ghana** loses about 6.4% of its GNP annually due to ill-health. In addition, it is estimated that Ghana's low life expectancy of 57 years deprives the country of about US$ 620 million in annual output. In addition, the burden of diseases such as malaria – which accounts for over 43% of all outpatients seen in Ghana's health facilities and 25% of under-five mortality – is estimated to cause about 600 000 lost disability adjusted life years (DALYs) in Ghana and in costs equivalent to about US$ 177.5 million*(18)*.

10 Office of the WHO Representative in China/Social Development Department of China State Council Development Research Centre, *op. cit.*

- In **India**, analysis suggests that if the residents of Uttar Pradesh were to have Kerala's life expectancy (nearly 15 years greater in 1995–1999), the net effect on the state's output would be 60% higher than its current levels. If used effectively, the rising number of workers in India's population has the potential of increasing the growth of real income per capita by an annual average of 0.7% cent points annually until 2025. Nearly 3.3% of the Indian population slides below the poverty line each year, due to illness alone *(19)*.
- Estimates indicate that in **Mexico** from 1970 to 1995, improved health was responsible for approximately one third of long-term economic growth *(20)*.

This holistic strategy aims to improve the long-term ability of public health leadership to plan effectively. The analytical and planning framework acts as a capacity-building tool, readying the health sector for future external or internal events, allowing current emergencies (i.e. HIV/AIDS) and future issues (e.g. the growing challenge of noncommunicable disease) to be dealt with in a systematic and coherent manner. The same process of building evidence, choosing good solutions, and then building a strong political base for action – employed by a macroeconomics and health paradigm – can work equally well for upcoming challenges.

Chapter 2 presents countries' experiences in tackling the issues limiting effective resource allocations. Country work has taken into consideration policy issues facing the ministry of health at every level of the health system. These levels have been defined as negotiations between the ministry of health and ministries of finance and planning; the health sector; and the relationship with development partners (see Box 6 for a summary of the issues present at each of these levels and Electronic Annex A for a detailed description). The chapter first outlines a more detailed description of the functions of the NCMHs that have been constant in all of the country experiences, and then proceeds to describe specific achievements of 12 selected countries to highlight the diversity of approaches.

Box 6 Checklist of policy issues at three levels[a]

Making collaboration a reality for ministries of finance and health
- Development plans that reflect health priorities
- Make rational and transparent linkages between policy, planning and budgeting

Challenges for health ministries
- Need for solid evidence on health systems and the population's health patterns
- Clearly define objectives and strategies in a multisectoral way
- Plan and cost needed investments based on believable estimates of resource requirements to achieve health goals
- Getting the mix of key inputs right
- Ensuring the optimal quantity and quality of the health workforce
- Reaching poor and rural populations
- Ensuring that health financing is equitable
- Working with civil society organizations and the private sector
- Integrating research into the health system
- Monitoring and evaluating results

Challenges at the interface with external partners
- Increasing funding to ensure reaching the national health priorities in low-income countries
- Aligning development assistance with national plans and budgets
- Harmonizing donor procedures.

[a] An elaboration of these policy issues can be found in the document *Checklist of policy issues for reaching national health targets* in Annex A of the attached CD.

Chapter 2 Sharing experiences from countries

Moving from a broad discussion on the contributions of the CMH follow-up work to scale-up of health interventions in countries, this chapter presents more specifically the roles of the NCMHs that have been common across countries. The various roles have had different levels of emphasis based on the specific country political and health priorities. Next, the process and early achievements in 12 countries are described in some detail to highlight the flexibility to adapt to country situations – for no country is there a blueprint. However, many countries discovered that establishing an NCMH or a similar intersectoral body was an effective way to bring all players to the table and to link analytical work with policy decisions.

Areas for action by national commissions on macroeconomics and health

Enhance political support for increased health investments and positioning of health in development

Building commitment. At the heart of sustained improvements in health is the ability to convince those who hold the purse strings that better health is a basis of national prosperity. Without the commitment of the ministry of finance and the ministry of planning, health will not receive adequate attention in national development strategies or budgets.

Until recently, health was viewed predominantly as a consumption item and health improvements as largely the **result** of economic development. The CMH report triggered a significant shift, demonstrating that health is a key engine for economic development and fighting poverty through a variety of transmission mechanisms, including increased individual productivity, a fall in birth rates (enabling parents to invest more in each child) and rising life expectancies *(7)*. The CMH estimated that a sixfold return would be observed on investments to expand access to a set of essential health interventions.

Box 7 Making the economic case for health investments in the WHO European Region[a]

The ongoing macroeconomics and health work by the WHO Regional Office for Europe shows that the relevance of the CMH's underlying idea – "Health is good for the economy" – applies beyond what are traditionally considered "developing countries". In terms of health, the most characteristic feature of the countries in the WHO European Region – whether they are in the low-, middle- or high-income category – is the predominance of the noncommunicable disease burden. In contrast, most of the low-income countries that were the primary focus of the CMH report face a much larger burden of communicable disease, as well as that associated with child and maternal health.

The work that is being summarized in a series of reports and background papers strongly rejects the conventional view that a predominant burden of NCDs would not cause a significant economic loss since it would be striking people after retirement age. Particularly in eastern Europe and central Asia, the age pattern of adult morbidity and mortality is strikingly young, hitting people in their prime working age. The associated economic loss is substantial, for themselves and the households/families they are heading. Communicable disease challenges

(e.g. tuberculosis and HIV/AIDS) are also emerging in several of these countries, affecting people at particularly young ages.

Demonstrating the economic returns to health improvements in the European and central Asian countries is significant, because it establishes the rationale for why national policy-makers outside the health sector should scale up efforts to promote health. Health should become an integral part of the overall national development strategy, and there is reason to believe that the efforts devoted to health are currently not sufficient in the eastern part of the European region – probably because the wider economic benefits are not made sufficiently explicit.

Among other related country-specific outputs, the WHO European Office is finalizing the report, entitled *Health: a vital investment for economic development in Eastern Europe and Central Asia (ECA)* and (jointly with the Council of Europe Development Bank and the Council of Europe) is preparing a report on *Health and economic development in south-eastern Europe in the 21st century.* The regional office also contributed to the report *The contribution of health to the economy in the European Union*, which was published in October 2005 by the Health and Consumer Protection Directorate-General of the European Commission *(21)*.[b]

[a] Prepared by Marc Suhrcke, WHO European Office for Investment for Health and Development, Venice, November 2005.
[b] For updates see www.euro.who.int/socialdeterminants/develop/20050706_1.

Given the competition from many sectors for scarce resources, the demonstration of the potential of health to make substantial contributions to productive capacity is a valuable advocacy tool. Many countries have begun to demonstrate the economic benefits of investing in health within their specific national contexts, providing additional justification for increased public resource allocations to the health and health-related sectors. Box 7 describes efforts to further incorporate the CMH recommendations into the context of the WHO European Region.

The NCMHs established by many countries have enabled the institutionalization of a dialogue between the ministries of health and finance. This dialogue provides an opportunity to present the evidence described above, and to make the case for more investment in and attention to health – as well as backing these demands with a clear plan for the use of the funds.

The establishment of a mechanism for intersectoral coordination enables the redefinition of sectoral priorities to represent all the factors influencing health outcomes. For example, the Macroeconomics and Health Initiative in **Ghana** is fully supported by the ministries responsible for health and for water and sanitation, as well as the Ministry of Finance. The health investment plan developed in Ghana includes strategies and costing for meeting water and sanitation targets. In **Senegal**, the Ministry of Health is building on efforts to facilitate a policy dialogue on health investment among ministries that deliver inputs for health, and is now working towards implementation of a process for multi-sectoral planning at the district level.

Health central in development plans. PRSPs often combine various sectoral activities without first undertaking a holistic assessment of overall national priorities and the effectiveness of current expenditures. In many countries, health is inadequately represented in national development strategies. It is therefore unlikely that health will receive adequate attention in the budget. This becomes increasingly important as donors move towards budget support. In **Ghana**, the Government sees the health investment plan as a key input into the revised Ghana Poverty Reduction Strategy, in which the MDGs will be integrated as development targets, as well as the Ministry of Health Programme of Work for 2007–2011.

In addition, health sector strategies are often prepared independently of the creation of national budgets by the ministry of finance. Furthermore, weak public expenditure management results in late and unpredictable disbursement of resources, rendering planning impossible in the medium- to long-term. This situation is critical in the health sector because many key inputs into a health system – such as human resources – engender large recurrent costs. Ministers of health will be hesitant to undertake needed investments that cannot be maintained if expected resources are not forthcoming. Introduction of the medium-term expenditure framework is one response – an attempt to link sector strategies to resource allocations over a period of three to five years.

The opportunity posed by NCMHs for constructive dialogues between ministries of health, planning, and finance is useful. Such dialogues can ensure greater visibility for health as a key contributor to poverty reduction, and for linkages of health sector strategies to medium-term and annual budgets.

Create comprehensive strategies and systems that better address the health of the poor

Comprehensive health strategies. Demonstration of the effective use of existing resources is perhaps the most convincing advocacy tool for achieving increased resource allocations. If ministries of health are to contribute meaningfully to developmental planning, and to enhance their position vis-à-vis ministries of finance and planning, they must be able to develop and present a comprehensive costed health sector strategy.

The costing exercises undertaken by the countries reflected different methodologies and priorities. In **Ghana**, they were linked to costing the health component of the PRSP. In **India**, the costing was done for the delivery of packages of essential interventions with a strategy for health sector reform. In **Yemen**, the costing was done for an MDGs needs assessment and the five-year health sector plan. A brief overview of the overall methodology can be found in Box 8.

Box 8 Summary of costing methodology in CMH countries[a]

One of the main objectives of the CMH follow-up work has been to estimate the resources needed to scale up a set of priority interventions. In some countries, this costing work was coordinated by the national commissions on macroeconomics and health. This was the case in Ghana and India. In Yemen, costing was done in conjunction with the United Nations Millennium Project to estimate the cost for achievement of the health MDGs.

In Ghana and India,[b] the cost of scaling up interventions – taking into account the health systems components – was estimated to be almost triple the current overall health budget. Calculating the resources gap is fundamental to strengthen national development plans and health sector reform. It is also a basis for aligning partners around a costed plan and for advocating additional resources from the government.

There are various possible approaches for resource estimation. In the context of macroeconomics and health work, there was an evident lack of costing tools that were appropriate for a basket of diverse essential interventions and that represented the costs and synergies of shared health system inputs. See Box 9 for a description of one WHO initiative and how it is addressing some of these needs.

Choice of costing methodologies was dependent on the purpose of the estimation, availability of data (interventions, targets, activities, and their unit cost), and capacity. Any costing methodology

should be flexible – adaptable to the specific country context – rather than prescriptive for global or specific programme-related resource estimation purposes.

In Yemen, for example, the Ministry of Public Health and Population has completed the costing of the health component for the five-year National Poverty Reduction and Development Plan. This costing required – among other approaches – an adaptation of the MDG targets to less ambitious targets, taken in the context of national health development. This resulted in more realistic financing scenarios in terms of national target-setting and delivering the priority interventions to the district level.

In general, resource estimations proceeded according to the following basic steps, as outlined in most guidelines on costing.[c,d]

1. Defining the scope of the estimation
2. Estimating the population in need
3. Establishing baseline levels and target levels for coverage of services, which will also determine the assumptions on capacity and the possible rate of scaling up services
4. Cost assessment (balance between needs-based and budget item-based estimations)
5. Addressing uncertainty: sensitivity analysis and scenarios

[a] Based on draft guidance on resource estimation for a health package prepared by Jeanette de Putter, Coordination of Macroeconomics and Health Support Unit World Health Organization, and Phil Compernolle of the Royal Tropical Institute, Amsterdam, November 2005.
[b] More detail on the costing methodologies employed by the Ghana and India NCMHs can be found in the country reports in the accompanying CD-ROM.
[c] Drummond et al. *Methods for the economic evaluation of health care programmes*, 2nd ed. Oxford, Oxford University Press, 1997.
[d] Tan-Torres et al. *Guide to cost-effectiveness analysis*. Geneva, World Health Organization, 2003.

Box 9 WHO-CHOICE costing tools[a]

In January 2004, WHO and the Global Fund to Fight Aids, Tuberculosis, and Malaria hosted a workshop on costing tools. The workshop was attended by tool developers and potential users, such as national disease control programme managers and planners. There was general agreement on the need for disease-specific – and more urgently, health system strengthening – costing tools.

Since that time, WHO-CHOICE has developed – or is in the process of developing – costing tools for the health MDG diseases (child and maternal/neonatal health, malaria, tuberculosis, HIV/AIDS). These disease-specific costing tools are designed to have a standard format, so that they can interface seamlessly with the health system financial planning tool or the "backbone", called BB for short.

All the tools allow medium-term costing to cover periods from three to ten years. The disease-specific costing tools include commodities such as drugs and tests, and also calculate the impact on the health system in terms of outpatient visits and in-hospital days. At the same time, they also include disease-specific programme costs such as monitoring and evaluation, supervision and training, storage, deployment and transport, and advocacy and strategic communication.

The health system financial planning tool includes calculations for human resources in the health area, infrastructure, management information systems, and other administrative support functions. The health system financial planning tool can be used independently or in conjunction with the disease-specific costing tools.

All these tools are populated with various databases which will provide preliminary country information such as population, including rural/urban growth projections, that analysts can utilize as a starting point for their estimation. It is hoped that the availability of these tools can assist national planners in estimating resource needs and costs for scaling up.

[a] Prepared by T. Tan-Torres Edejer, Evidence and Information for Policy, World Health Organization, November 2005.

Evidence is the key to ensuring effective management of resources for health. The NCMHs have acted as a catalyst for integration of country-specific research and national policy-making. The existing gaps in knowledge form the basis of the national mechanism's research agenda. The investment plan makes the case for priority interventions and estimates the funding necessary to provide these interventions.

Again, without the complementary improvement of other sectors such as education, water and sanitation, and environment, countries will be unable to optimize investments in health or achieve national health objectives. Health planning efforts must take into account actions of ministries other than the ministry of health that deliver health services or make decision that impact on health.

In **China**, for example, approximately 12 ministries or administrations play a role in health. In **India**, the main areas of analysis conducted for the health investment plan include an assessment of current health financing mechanisms and options for mobilizing additional resources, costing of an essential health services package, and the role of the public and private sector in delivery of this package.

Health and development work in the **Caribbean Community** has included a clear assessment of all determinants of health, coupled with selected studies on burden and cost of disease. It has also undertaken innovative studies, such as a first look at the real impact of health status on the viability of foreign direct investment and tourism, options for managing health worker migration, and options for more equitable financing. This knowledge will be used as an advocacy tool and to influence development policy in the countries of the Caribbean Community.

Tracking progress using intermediate indicators. To fulfil the functions effectively, continuous measurement of the policy impact of the various efforts is crucial. Such tracking of intermediate achievements, for example, changes in the amounts budgeted for health or the allocation of funds, creates not only a basis for better management of existing health resources but also increases the transparency of the use of funds to promote increased domestic and external investments in health.

The important time lag between the reallocation of funds and their possible impact on health outcomes calls for intermediate indicators that allow for a continuous monitoring of changes in the allocation of funds and of the inputs purchased for providing health services.

As a first step towards developing a baseline against which to measure progress, some NCMHs have developed health investment plans which compare current expenditure to a needs-based costing of essential interventions. Based on national aggregates, the funding gaps at the decentralized level would need to be calculated in order that allocative changes at the district level can be planned and monitored.

Due to the scarcity of disaggregated and recent data in most countries, fulfilling the functions introduced above in a sustained way requires that other functions be undertaken. These functions include identifying indicators, collecting data, setting targets – and finally – using them to monitor and evaluate change on a continuous basis.

Engagement of civil society organizations and the private sector. The participation of communities in defining health objectives and processes has been promoted by WHO for decades, starting with the 1976 Alma Ata Declaration, which made participation a central feature of primary health care. In the 1980s, the emphasis on decentralizing health systems located the community as an important actor in organizing health sector interventions at district level *(22)*.

Box 10 Eastern Mediterranean Region: empowering communities

In the WHO Eastern Mediterranean Region, the CMH follow-up work has been linked closely to the community-based initiatives (CBIs), which include programmes such as Basic Development Needs and Healthy Cities, Healthy Villages and Women in Health and Development. These approaches provide tools through which communities can identify their socioeconomic needs – in particular their health-related needs – and can plan to fill the gaps through their active involvement. In this way, CBIs empower communities and local social services providers to become self-sustained and less reliant on government support. At the core of the approach is the principle that good community health – an important goal in its own right – is central to creating and sustaining the capabilities of poor people to meet their basic needs and overcome poverty.

At present, all countries in the Region are implementing at least one of the CBI components. Of the CMH countries in the WHO Eastern Mediterranean Region, the Islamic Republic of Iran, Jordan, Pakistan, Sudan, and Yemen have established CBI units within their ministries of health. The Islamic Republic of Iran, Jordan, and Pakistan have also allocated an annual budget for maintenance and expansion of the programme. In addition, Jordan, Pakistan, and Sudan have linked the programme with national and international nongovernmental organizations. Others are in the process of integrating the community-based approach within their health and development plans and institutionalizing it within their national health policy.

As an example of one of the CBI programmes, Basic Development Needs (BDN) projects impact on basic needs both within and outside the health sector, such as primary health care, basic education, provision of safe drinking-water, shelter, sanitation, and a safe environment. The provision of micro-credit schemes for income generation also falls within the purview of the programme. An intersectoral team from line departments supports local community representatives and district authorities, offering technical assistance in priority setting and selecting social and income-generating ventures, building local organizations, and implementing the programmes. They also constitute the bridge that conveys community concerns and perceived needs to the relevant line departments of the district government. BDN teams are thus helpful in generating the trust and confidence necessary for building a solid partnership between the government and civil society organizations.

The BDN programme – like the CMH – is based on recognition of the linkages between poverty reduction and health. CMH follow-up supports strengthening systems and institutions towards increasing access for the poor to essential health services and protecting against poverty traps due to ill health. CBI, at the microeconomic level, supports the empowerment of communities to adopt strategies for poverty reduction and sustainable development activities. In addition, the feasibility and potential of community-based health financing in BDN areas is now being explored. Integration of different health-related programmes in the areas where CBIs are implemented will be an opportunity to involve communities in the planning, implementation, and monitoring processes that will result in increased sustainability of development programmes.

The further development of the concept of ownership is promoted in the Millennium Declaration, in PRSPs, SWAps, and in several other development assistance strategies. A study on 16 Asian countries has reported that the countries with the best performance in social indicators were those where a strong link existed between central government and rural communities in the form of a network of local civil institutions *(23)*.

In several countries described in this report, civil society organizations participated in the national health and development mechanisms. In the WHO Eastern Mediterranean Region, the CMH follow-up work has been linked closely to the community-based initiatives (see Box 10). Countries undertook to learn lessons from existing CSO experiences in health and development, adapt these experiences to the national context, and identify modalities of interaction between governments and civil society towards a more innovative approach to investment in health for poverty reduction. The various contributions from the macroeconomics and health national processes and reports have fallen under the two main areas traditionally defining CSO involvement in social policy governance (including health). These two main areas can be summarized as social mobilization and provision of services *(17)*.

Social mobilization includes all those activities aimed at providing a voice for citizens to advance their interest in the interaction with public policies. Country experiences have highlighted the importance of social monitoring of health and development policies at the local level, closely linked to national decentralization processes. Important areas of work for NGOs also include activities such as participatory research and, increasingly, services in health financing.

Since many of the health services used by poor people are delivered by the private sector, this sector must also be taken into account when considering how to improve equity and address issues of access for poor people to essential health services.

Increase the effectiveness of development assistance for health

There is a growing consensus that much greater development assistance is needed than has been seen in the past, although a debate as to the timing and quantity is ongoing. Box 11 summarizes the current debate on the potential and the limitations of rapid increases in aid. A number of reports have estimated the total financial envelope needed to reach the MDGs.

Box 11 How much aid and how quickly?

The notion that a more rapid increase in external funding is the answer to slow progress towards the MDGs in many countries is supported by the assumption that some countries lack the resources to make the essential investments needed for basic social service provision and economic development *(13)*. Opponents to a rapid and significant scale-up in development assistance say that a ‘big push’ in aid is unlikely to translate into development progress, especially in countries with weak institutions and poor governance where aid effectiveness has been particularly low in the past *(24)*. Another concern is the potential of aid inflows to cause macroeconomic instability. While these effects have been observed in some low-income, aid-dependent countries, aid can be also used to circumvent the risks of real exchange-rate appreciation and crowding out of the private sector by improving economic productivity and by financing imports *(25)*.

In the effort to account for various policy environments, the United Nations Millennium Project distinguishes between two causes of poor governance – "genuinely 'corrupt' leadership" and "governance that is weak not because of the ill will of the leaders, but because the state lacks the

financial resources and technical capacity to manage an efficient public administration". In the latter case, a massive scale-up of external investments is recommended to set in motion a virtuous cycle of growth. Concretely, the United Nations Millennium Project has selected fast-track countries for a rapid scale-up of aid based on criteria such as good governance and political leadership. By contrast, the United States Millennium Challenge Account is much more selective, and had identified only 16 eligible countries to receive increased aid as of late 2005. In addition to increasing the overall effectiveness of aid, tying official development assistance (ODA) to conditions may create an incentive to countries with poor governance.

Renewed efforts are needed to translate the insights of this debate into well-sequenced and refined health and development strategies. A selective approach in the allocation of additional aid does not preclude the provision of concrete strategies to strengthen a weak political and institutional environment to ensure that the additional aid is allocated effectively and equitably. Such strategies are urgently needed not only to support countries with weak governance, but also to strengthen institutions and capacity in countries with better governance to prepare them for a rapid scale-up of aid.

The country experiences described in this report provide not only evidence of the various constraints upon improving health outcomes at country level and funding gaps, but also concrete strategies on how to address the systemic and institutional bottlenecks between more funding and better results through longer-term development strategies. These strategies aim at laying the foundations for reaching the health MDGs and other national health objectives and to advocate for more government health investments and to spend these investments more effectively.

Developed countries themselves have committed to augment development assistance. More aid, however, must be accompanied by efforts to increase its effectiveness. Donors traditionally have provided the bulk of their support to project-oriented, disease-specific programmes based on national geopolitical interests, resulting in suboptimal allocations. Donor policies and practices have the potential to undermine national capacity, taxing limited national systems and institutions, rather than working towards weaning countries from development assistance in the long term. The 2003 Rome Declaration on Harmonization and the 2005 Paris Declaration on Aid Effectiveness represent efforts to harmonize policies, procedures, and practices of donors with those of their developing partner countries for improved aid effectiveness.

Many of the countries whose experiences are described in this report have used the national macroeconomics and health mechanism to involve donors and other key stakeholders at all stages of the planning process. Their goal has been to bring them to a consensus around one national evidence-based health sector strategy to be funded through domestic resources and donor budget support. The health and development mechanism is an effective means for coordinating and integrating donor support, including support for disease- and population-specific programmes and ensuring that the support is consistent with a country's overall development strategy. Countries and their partners can thus advance a shared agenda for addressing financial and system constraints to equitable access to essential health services.

For example, in **Indonesia** the CMH issues have been raised through existing stakeholder mechanisms – including the Partners for Health forum (of which the Government and development partners are members) and the Consultative Group of Indonesia (the main government–donor forum). In **Nepal**, the national commission intends to develop pro-poor district health investment plans that can then be presented to donors to discuss their funding and implementation.

Initiatives at country level

There follows a closer look at 12 countries that have taken the steps towards institutional capacity building for scaling up and managing health investments within very diverse political, economic, and social contexts. The most pertinent experiences from each country in this respect are presented. These summaries have been adapted from the texts of the national reports on macroeconomics and health and other government documents.[11]

Cambodia[12]

Health has been recognized by the Royal Government of Cambodia as an important component of its economic development and poverty alleviation policies. In this context, the ***Cambodia Macroeconomics and Health Technical Advisory Group (TAG)*** *was created to conduct collaborative research and policy analysis for improving public health financing. Comprising professional staff from the Health Sector Steering Committee (Ministry of Health, Ministry of Economy and Finance, and Ministry of Planning), the TAG* ***facilitates cooperation between these sectors towards mutual trust, a shared understanding of key health sector issues and a collective policy direction****. The focus of TAG's activities has been on better budget management processes and strengthened sectoral planning. Involvement of civil society has been an important feature of the TAG work.*

Creation of the Cambodian Macroeconomics and Health Technical Advisory Committee

The public health sector has been recognized by the Royal Government of Cambodia as a priority area in its economic development and poverty alleviation policies. The Ministry of Health has been selected as one of the key ministries for public sector reform processes, including the priority action programme, and piloting of the medium-term expenditure framework and programme based budgeting. Cambodia has committed itself to the Cambodian Millennium Development Goals, which will form a central element of the National Strategic Development Plan currently under preparation. Also, within the health sector, the Government of Cambodia has been pursuing sector-wide management with its partners, as a part of broader efforts towards donor harmonization and alignment.

In order to avoid duplication and possible undermining of existing initiatives, it was decided that macroeconomics and health follow-up work should support established coordination mechanisms – rather than establish a new national commission on macroeconomics and health. The focus of this approach has been upon promoting knowledge-sharing among institutional partners at the technical level, in order to inform coordinated policy formulation, increase trust, and mitigate possible conflicts. Another key long-term goal has been to strengthen research and policy analysis capacities within the Government, to decrease reliance of the Government and donors on international consultants.

To facilitate these processes, the Cambodian Macroeconomics and Health Technical Advisory Group (TAG) was established under the Health Sector Steering Committee (the Ministry of Health, the Ministry of Economy and Finance, and the Ministry of Planning, in conjunction with the Technical Working Group on Health). The TAG is made up of professionals drawn from the three ministries to plan and carry out joint policy analysis and research, as a means for identifying and addressing problem areas of interministerial coordination for the health sector. Knowledge-sharing among civil society organizations has been supported via MEDiCAM – the Cambodian umbrella organization for CSOs in the health sector – which has carried out an investigation into the role of CSOs in macroeconomics and health processes.

11 The complete reports of the NCMHs and other country reports are available on the CD accompanying this report as well as online at www.who.int/macrohealth.
12 Adapted from the case-study prepared by Benjamin Lane, Columbia University, CMH Focal Point in Cambodia.

Two key features of the Cambodian macroeconomics and health processes have been regular TAG retreats, as well as a national symposium on macroeconomics and health. TAG retreats are dedicated to in-depth analysis of problem areas identified in TAG research – including the budget disbursement problem and options for relaxing the numerous institutional constraints aggravating it – as well as the challenges of instituting programme based budgeting for the health sector. The national symposium, held in August 2005, used the presentation of working papers by the TAG, MEDiCAM and CARE Cambodia to launch a wide-ranging re-evaluation of the financing system for the Cambodian public health sector. Participants included senior management from throughout the Ministry of Health, the Ministry of Economy and Finance, and the Ministry of Planning, as well as key international and civil society partners.

Focus on the public sector

The Cambodian macroeconomics and health follow-up work has been primarily focused on the financing of the public sector. While the private sector must eventually play an important role in improving health outcomes, significant strengthening of sectors ranging from the judiciary to education will be required before the necessary regulation can be effectively put into place.

A stronger public sector can, however, provide a viable alternative yielding reliably good value and quality of service to all Cambodians – including the poorest and most vulnerable. Achieving this objective will require that scarce resources for the sector be used as efficiently and effectively as possible, and that all relevant ministries and CSOs better coordinate their activities from financing and planning through implementation. TAG and partners have focused on three broad challenges to be addressed in this context: budgetary management, health sector planning, and health financing. These challenges are described below.

Budgetary management. Government funds allocated to the Ministry of Health accounted for 11.7% of the national budget in 2005 and have tripled since 1995. Even though the percentage of national expenditures devoted to health is already very high by international standards, this only represents 1% of GDP *(26)*. As health already accounts for a large portion of government expenditures, in order to substantially increase health expenditure it will be necessary to increase revenues into the national treasury. However, despite rapid economic growth over the past decade, over 85% of the labour force still works in the informal sector – leaving a weak tax base and few viable options for increasing national revenues.

At the same time, the budgeting process suffers from a number of weaknesses that reduce the effectiveness of the funding that is available. The most serious of these is budget execution, which is incomplete and subject to long delays. Incomplete disbursement of funds budgeted for health means that the Ministry of Health has no reliable way of knowing what funds will actually be available to it.

Without a reliable budget envelope, planning and budgeting within the Ministry of Health must be based on best estimates of what might be available, based on trends over the past years. This increases the likelihood that planning at the facility and district levels will be based on incremental rather than needs-based budgeting, which makes scaling-up of essential services especially difficult. Delays in budget disbursement cause unreliable flows of operating funds throughout the system, and damage staff morale and quality of service delivery. They also disrupt the procurement of medical supplies, including essential medicines. Coping mechanisms (such as reliance on money-lenders) increase costs to the system and further reduce resources available for health services.

These delays result from a number of compounding factors and constraints. At the beginning of each year the Ministry of Economics and Finance must first pay arrears to ministries from the

previous year. The inflow of funds to the national treasury is uneven, and the timing of major outlays may be beyond the control of the Ministry of Economics and Finance. Many ministries submit requests late, overwhelming the Ministry's capacities.

Together with the unrealistic nature of the national budget, these factors may result in a precautionary approach to expenditures on the part of the Ministry of Economics and Finance. Throughout the budgeting system in the Ministry of Economics and Finance and the Ministry of Health, budgetary management capacities are still weak. Administrative processes are complex, with unclear lines of authority and accountability. These constraints are aggravated by the simultaneous use of multiple budgetary management systems in the Ministry of Health and frequent changes in their implementation procedures.

Many of these constraints can be eased through closer cooperation and regular, informal information sharing between the Ministry of Economics and Finance and the Ministry of Health, as well as across units within the ministries. Initiatives such as the TAG can play an important role in this regard. Constraints upon technical capacities can be eased through improved salaries, focused training, and the Ministry of Economics and Finance capacities support for the Ministry of Health. Also helpful is a more strategic approach to technical assistance that strengthens capacities through increased use of national consultants and capacities development as a contractual obligation.

Overly complex administrative processes can be simplified through specification of roles and responsibilities for budgeting, control and monitoring. Increased delegation of spending authority can also help, so long as it can be ensured that allocations are dependent upon established priorities and plans of action rather than personal discretion.

The planning problem. It is critical to the efficient use of scarce resources that they be fully reflected in national planning processes, giving government and key partners a comprehensive view in order to better identify key gaps in coverage. For the Government of Cambodia to ensure that funds are used in a complementary manner, they must have a clear overview of resources flowing into Cambodia and the purposes these are intended to serve.

External assistance to the public health sector is estimated at US$ 83.5 million or US$ 6.40 per capita for health in 2003 *(27)*. In that year, only 20% of donor funds flowed through the national treasury. The other 80% bypassed the national budgeting process and flowed either directly to Ministry of Health national programmes, health facilities, or to the more than 100 nongovernmental organizations working independently in the health sector.

It is therefore extremely difficult to gain an accurate picture of the resources available for national health priorities. The planning problem is reflected in the difficulty of targeting funds to the most pressing needs. Because the source of funding is outside Cambodia, money may be directed to needs as they are perceived from abroad instead of in Cambodia. As a result of global trends, some areas are relatively well-funded while others – such as maternal and child health – remain seriously underfunded.

Re-evaluating the financing system. The 1996 Health Financing Charter was designed to bring transparency to the system of informal payments for 'free' services, as well as to address the lack of funding available at the operational levels of the public sector. A fixed scale of user fees for services was introduced, with 50% of revenues from these fees being kept at the facility level to supplement staff salaries, and 49% devoted to other running costs of those facilities. To safeguard against negative equity impacts, an exemption system was introduced to guarantee free health-care provision to the poor.

A rapidly-identified incentive problem involved the exemption system. This system called upon extremely low-paid health-care workers to subsidize the treatment of the poor through free provision of services for which they would otherwise have been paid. The Equity Fund system offers an innovative solution to these problems. It has been piloted in several forms in health districts around the country and is now due to be scaled up to several more. Equity Funds complement the user fee system by providing payment of user fees for those people who would otherwise qualify for exemptions. This provides financial incentives for facilities to provide the same care to all clients, while at the same time increasing funds available at the operational level.

As Equity Funds are currently funded through donor funds, their long-term sustainability will depend upon either continued international assistance or the identification of substantial new revenue sources for the health sector. Before undertaking a country-wide scale-up, it will therefore be necessary to identify what reliable sources of funding exist, as well as to assess the relative administrative burden and economic costs of Equity Funds vis-à-vis alternate mechanisms such as social health insurance or the development of a more robust exemption system.

Caribbean Community[13]

*The **Caribbean Commission on Health and Development (CCHD)** was instated to create the evidence base for placing health at the centre of development processes and in a manner that is useful for decision-making. The CCHD builds on CARICOM's aim of regional economic integration. The Report of the CCHD **analyses health and development issues based on locally-undertaken research to convince senior government leaders of the need for increased health investments** in a regionally coherent fashion. The recommendations of the Commission on issues such as human resource management, controlling noncommunicable diseases, and health financing are now being disseminated to all Cabinets in the region to engage high-level policy-makers on health issues and a plan for implementation is actively being pursued.*

Creation and objectives of the Caribbean Commission on Health and Development

The Caribbean Commission on Health and Development (CCHD) was created at the request of the Caribbean heads of government to 'give substance' to the Nassau Declaration on Health, July 2001, acknowledging the essential role of health in economic development of the region. The Commission is mandated to "advocate, review and help propel health to the centre of the development process and to draw on the body of research and development that provides for evidence-based decision making at all levels".

An analysis of the health systems and services of CARICOM countries showed that most countries in the region had a health plan, but that there was an evident lack of an effective system of collecting and presenting data in a manner that was useful for decision-making by health and other stakeholders. The Caribbean Community health and development work has broken new ground in taking a closer look at several important issues, including a first look at the real impact of health status on the viability of investments and tourism, the options for managing health- worker migration and options for more equitable financing.

Why a subregional approach?

The subregional approach of the CCHD builds on the existing position of CARICOM in integrating economic policies, particularly trade policies, and the ultimate aim for a single market economy in the region. This further emphasizes the importance of a regional perspective on policies that strengthens the role of the health sector for economic development.

13 Adapted from the Caribbean Commission on Health and Development, 2005 (16).

Further, subregional or regional commissions can respond to the similarity in health problems and their determinants among adjacent countries and deliver a consistent message to subregional institutions that could support the aim to integrate the countries economically and socially. As an example, the control of communicable disease such as HIV/AIDS and TB will have to address sociocultural risk factors that are similar across the countries and take into account the growing mobility within and into the region.

The subregional approach also lends itself to strengthening certain regional public goods. These public health goods benefit the region as a whole and are not expendable, including the capacity of public leadership and management, public health research, and surveillance. Strengthened infrastructure should be able to cope with the expected increased migration of people as regional economic integration becomes a reality.

The CCHD report evaluated several public health issues that can be extrapolated to most of the countries, and solutions that can be most effectively implemented cross-regionally. The report was the first step in establishing a regional research agenda and an expert network that can be accessed for future health and economic studies.

CCHD report: the power of locally-developed evidence

The CCHD report has been developed to assist the CARICOM member countries in structuring their health and development agendas. This structuring has been accomplished by an assessment of determinants of health, coupled with selected studies on burden and cost of disease.

An assessment has been made of the aggregate returns for areas such as direct foreign investment, tourism, and trade that can be expected from developing and implementing a long-term strategy for health investments and of the economic and social consequences of the epidemiological and demographic transitions in the region. Locally-developed research is being used to convince senior government leaders of the necessity for increased health investments that target the most vulnerable groups. Some of the issues tackled in the CCHD report are presented here.

Noncommunicable diseases. Obesity is a fast-growing epidemic in the region, contributing to the high chronic disease burden. It is acknowledged that interventions that influence individual behaviour – such as weight reduction, ideal weight maintenance, and nutritional education – are important, but that there is also a need for changes in the environment in which individuals are making these decisions. In particular, fat and other substances in food imports require closer regulation. Another area where regional regulation will prove to be important is in tobacco control – where regulation on taxes, advertising, and sales will benefit from a coordinated approach.

Human resource management. Another issue highlighted by the CCHD report – that will have regional impact – is the problem of human resource management, especially the issue of migration of nurses. The report quotes a 35% vacancy rate for nurses alone, with an estimated loss of government revenue of US$ 16.7 million to train nurses at the basic level. However, remittances are an important source of funds for some countries (the average for the region is 5% of GDP in 2000). In Jamaica, net remittance to GDP was found to be 10.7%.

The ministers of health of the region have already endorsed a programme of 'managed migration'. The Commission recommends the determination of the extent to which trade in nursing services and the permanent migration of nurses are symptomatic of deeper systemic considerations in the health sector and wider socioeconomic situation. The Commission also

calls for attention to be given to expansion of training and cost recovery from workers that choose to work outside of the region.

Financing health and protecting the poor. Public health expenditure as a percentage of total health expenditure ranges from 83% in Guyana to 45% in Trinidad and Tobago. The Commission describes a three-tiered health system where the very wealthy use overseas care, the upper-middle-income groups have health insurance and visit private providers, and the low-middle-income population and poor utilize public health services.

Due to budgetary constraints to increasing overall government health spending, and to compensate for low public spending on health, numerous countries have introduced or have increased user fees. These fees are regressive and have led to a decline in utilization levels by the poor (and especially rural) population, particularly for preventive care and health centre-based services. Moreover, the exemption systems put in place by countries such as Jamaica have proved ineffective and inadequately administered.

Several Caribbean countries have implemented innovative programmes to address health financing, management and purchasing concerns. Drug procurement programmes in Jamaica (Jamaica Drugs for the Elderly Programme) and Trinidad and Tobago (Chronic Disease Assistance Programme) have targeted persons over 60 years of age affected by noncommunicable diseases.

Due to weak regulation, particularly of private pharmacies, the results have been mixed. Programmes such as the Program for Advancement through Health and Education (PATH) in Jamaica seek to increase educational attainment and improve health outcomes among the poor. The PATH programme makes cash benefits available to people once they have met qualifications of school attendance and visits to health facilities.

Three countries in the region have universal health insurance and at least six others are evaluating national schemes. The CCHD notes that – with the prospect of free movement of labour and human capital in a Caribbean single market and economy – the time may be right to evaluate the feasibility of a Caribbean region-wide health insurance programme.

Way forward

The CCHD report was presented to the 26th Meeting of the CARICOM heads of government, where it was well-received. The heads of government asked that it be distributed to all stakeholders, that an implementation agenda be developed by the CARICOM Council on Human and Social Development, that necessary work for establishing a Caribbean-wide health insurance scheme be undertaken, and that the CCHD report findings be disseminated to all of the prime-ministers and their cabinets to further engage high-level policy-makers on health issues.

China[14]

The macroeconomics and health work in China has focused on ***understanding the impact of health on economic growth and on quantifying and documenting the challenges*** *to fighting inequalities and poverty. The main issues that will need to be addressed in China's efforts to scaling up health interventions, particularly for the rural and poor, are a comprehensive national health strategy by working across several ministries and administrations that have an impact on health, financing reforms for public health services, and addressing the market forces that have contributed to inequalities in access to care.*

14 Adapted from Office of the WHO Representative in China/Social Development Department of China State Council Development Research Centre, *op. cit.*

While China has made impressive gains in overall development, the gaps between rich and poor are growing. The forces unleashed by reforms – economic liberalization, decentralization, and freer migration – have brought with them certain unintended negative impacts on public services (including health) on equity, and on gender equality. The task now is to adjust policy to correct these negative impacts and to promote a stronger partnership between government, the private sector, and civil society. Such a partnership will help policy-makers define key problems and formulate solutions consistent with the balanced development strategy that will produce the level of commitment needed to ensure successful implementation, equity and sustainability.

Defining a clear national vision for health

Enhancing health in times of rapid socioeconomic changes demands a clear vision with respect to overall priority objectives for the health system and with respect to the government's role in health. Unparalleled transformations (in disease burden, employment structure, age structure, distribution of people across urban and rural areas, and in people's daily lifestyle) call for a new role of government to guide, monitor, evaluate, and reform the health system. Similarly, the role of the Government to prioritize, evaluate and manage the health system requires a clear overall vision for how the health system will fit into the emerging urban industrial society.

These needs are especially true when many line ministries (more than 12 ministries or administrations in China), numerous institutions, and different government levels play a role in health. It is vital that the Government advance comprehensive, high-level coordination across government agencies and public sector institutions that are directly and indirectly involved in health.

Such a multi-ministry system has both positive and negative results. It helps the health system to mobilize resources and receive support from many sectors, but it is difficult for those bodies to formulate unified health policies. Unclear responsibility limits the effectiveness of new public-health spending. Similarly, there is ambiguity about the role of the different levels of local government (township, county, prefecture, and province), which undermines the effectiveness of resource allocation. Thus, the importance of a clear national strategy for health is urgent and forms the context of the macroeconomics and health work in China.

Collecting the evidence on unequal development

The focus of the macroeconomics and health work in China has been on presenting the evidence to promote the need for a greater government role in ensuring affordable and quality health care for the population. China did not create a national commission on macroeconomics and health but over the last few years has focused on understanding the impact of health on economic growth and on quantifying and documenting the challenges to fighting inequalities and poverty.

A research group at the Development Research Centre of the State Council has taken the lead in synthesizing the research involving studies initiated by the macroeconomics and health work in the country. Their report summarized the health issues and challenges presently confronting China; the strategies currently followed by the Government to deal with these issues, as well as strategies being planned for the coming years; and the lessons learnt over the last few years.

Out of this work in China comes the recognition that even though the economy will continue to expand and government revenues will increase, public spending on health will not be significantly increased in the future unless the Government can be persuaded that spending on health gives a

good return on investment. This return includes achieving good health outcomes for the marginalized as well as contributing to economic growth. Research has focused on documenting the financial barriers to health care, including the overpricing of services, the inequities of resource allocation, and the influence of health on the economy and consumer behaviour. These issues are briefly summarized below.

Barriers in financial access to medical services. Financial barriers to health care in China are significant. Despite large-scale investments in health infrastructure and expanded coverage, many people have -– for financial reasons – reduced their use of medical services in recent years. According to the third National Health Services Survey (NHSS) in 2003, 70% of those failing to take inpatient care cited financial difficulty as the reason.

After financing reforms in 1980, the Government's contribution to the revenue of health institutions had fallen substantially – barely covering the salaries of health workers. The incentive to recuperate lost revenue led to overprovision of unnecessary services, and underprovision of socially desirable services. User fees further reduced the demand for preventive services. Weak enforcement of related government regulations further contributed to the changing behaviour of health providers in China.

Growing gap in the health system. Progress in the health system has been uneven, with wide disparities in almost all aspects tied closely to income inequality between urban and rural areas, among regions and between income groups.

Rural–urban. While childhood mortality rates in developed coastal areas approach under-five mortality rates of industrialized countries, rates in most western provinces are three to five times higher. Moreover, national health account studies show that per capita health expenditure in urban areas was 3.29 times of that in rural areas in 1998, increasing to 3.64 in 2003.

Income inequality. Using the data from the NHSS conducted in 1993, 1998 and 2003, it can be seen that the social health insurance coverage rate for the top income group decreased slightly from 72.1% in 1993 to 70.3% in 2003, while that for the bottom group dropped dramatically from 36.7% to 12.3% over the same period.

Inequitable and ineffective allocation of public resources in health. If the current health expenditure patterns persist, it will take another 23 years for rural citizens to get the same level of health support from the Government as urban citizens. In recent years the Government has increased substantially the health investment in the western rural counties, but most of Government spending has been used in the capitals of the counties, less at the township level, and almost nothing at the village level of health providers, where over half of rural patients access care. Governments in poor regions provide fewer and lower quality services and pass along a higher proportion of the costs to the people they serve.

To raise revenue to compensate for funding shortages, health providers charge patients for services and undercut quality. Hospital spending represents a disproportionate part of the total health expenditure, and there is an oversupply of unnecessary medical services.

Soaring cost of health care. National health account studies show that China's total health expenditure increased on average by 11% annually at current prices from 1979 to 2004. Neither the current medical service pricing system nor the provider payment mechanisms, nor the pharmaceutical production and distribution systems contribute to cost control.

The ageing population will also increase health spending, because older people have higher health costs than the young. While the ageing of the population is inevitable, government policies can influence how efficiently the health-care system addresses the needs of the elderly.

Role of health in economic development. The single most important driving force for rapid economic growth in China over the past 25 years has been the significant accumulation of physical capital. However, a Development Research Centre study suggests that in the next 15 years the total factor productivity (TFP) will play an increasingly important role in sustaining high economic growth. Health status of workers is thought to be a contributing factor to TFP.

Depressed household consumption. The Development Research Centre suggests that the consumption ratio in China should be increased from 55.5% of GDP in 2003 to 64.9% in 2020, to be more comparable to other lower-middle- and middle-income countries. Studies show that weakening health financial protection programmes for the general population in China have increased the population's uncertainty about the future, consequently encouraging their saving behaviour.

Initiatives to guide government's role in health

In an effort to address these problems of the health sector, China is implementing several initiatives towards stronger government leadership for health. These initiatives include the following.

The New Rural Cooperative Medical Scheme (New RCMS). The New RCMS is designed to relieve the excessive financial burden of health care on rural residents. It pools funds for catastrophic illness and inpatient medical services. Participation is voluntary, and the cost is designed to be bearable for farming families. County, prefecture and provincial governments (and in central and western regions, the central Government) contribute to the local New RCMSs based on the number of participants. The very poor will be helped to meet the costs of participating through a medical financial help scheme.

By 2010, the New RCMS is expected to cover most of the country's rural households, but there are concerns about the ability of the current design to scale up for full coverage. The major concern is that the New RCMS emphasis on payments for catastrophic illnesses will not attract enough subscribers (because the reimbursement rate is too low to address the risk of impoverishment) over a long enough period to make the scheme viable.

Medical financial assistance schemes for the rural poor. Medical Financial Assistance (MFA) was established in 2000 as a government initiative to address the needs of the poor in urban and rural areas. The MFA is intended mainly to assist the rural and urban poor in covering the cost of basic health-care services. MFA is managed by the civil affairs authorities of municipal governments and varies greatly across cities, depending largely on the fiscal capacity of local governments. Richer municipalities, such as Beijing, Shanghai, and Xiamen, offer comprehensive MFA to families living below the local urban poverty line. In rural towns, the MFA system is less developed and has yet to be integrated into the New RCMS.

Government efforts towards poverty reduction. China's current rural poverty reduction policy covers the period from May 2001 to 2010. A key target is to alleviate poverty among 30 million rural poor. The focus will be on remote mountainous areas, ethnic minority areas, and extremely

poor regions. This policy emphasizes participatory planning at the village level and poverty relief for farmers and villages, with a particular focus on helping the poor develop economically so that the results are sustainable. In addition, the strategy aims to mobilize society, including businesses, nongovernmental organizations, and donor organizations, to participate in the poverty-reduction effort.

China's western region development strategy (the "Go West" campaign) also constitutes a key poverty reduction initiative. Initial work was launched during the Tenth Five-Year Plan period (2001–2005) and focuses on addressing inadequate infrastructure, halting ecological deterioration, and addressing the shortage of trained and experienced personnel to carry out the initiative.

Lessons learnt and future directions for strengthening government role in health

During the post-1978 reforms, while the economy surged ahead, attention to health languished and public financial support declined steadily through the end of the 20th century. In many areas, health-care services were left to the market and available only at a market price.

China's experience in fighting SARS suggested that an adequate delivery of public goods in health invokes a larger role for government. Appropriately, since 2003, the Government of China has shown commitment to public goods in health. Expanding its investment in health, the Government has provided new support in many areas, including early intervention against HIV/AIDS, control of TB and schistosomiasis, and biosafety. New legislation on infectious disease control establishes free immunization against all major infectious diseases, including hepatitis B. Furthermore, China has been improving its disease surveillance systems.

The Chinese experience of financing reforms of public health services has generated important lessons for other nations. First, a decline in the role of government in financing public health services is likely to result in decreased overall efficiency of the health sector. Second, levying charges for public health services can reduce demand for these services and increase the risk of disease transmission. Third, market-oriented financing reforms of public health services should not be considered as a policy option.

However, a large-scale increase alone in health investment is not the answer. Instead, there is a need to make the Chinese health system more effective, efficient, and accountable. Future strategies will need to address the inefficient management of health resources due to lack of long-term, less-dispersed sectoral planning, as well as inadequate government regulations designed to prevent price distortions and activities of health providers.

In this vein, initiatives have been proposed to ensure a stronger government role in improving health outcomes for the most vulnerable through financing reforms as part of overall economic development and targeting pockets of poverty. These initiatives focus on these primary issues:

- an essential package of health for all;
- greater equity and efficiency in public resource allocation in health;
- promoting quality and cost control in health care; and
- moving towards a comprehensive poverty-reduction strategy.

Ghana[15]

*In mid-2002 Ghana set up the **Ghana Macroeconomics and Health Initiative (GMHI)**. The GMHI is a national mechanism for **advocating for enhanced investment in health, improving the setting of priorities in the health sector, and achieving more effective decision-making on resource allocations** to health. The GMHI report will be used to contribute towards the revision of the Ghana Poverty Reduction Strategy (GPRS). The GMHI report will also provide input into the Ministry of Health Third Programme of Work (2007–2011), and districts have been requested to use it as a reference while drawing up their health plans and budgets. Importantly, the report will serve as an advocacy tool for soliciting commitments and attracting increased resources to health, water and sanitation sectors and **aligning development partners** around national health priorities.*

Creation of the Ghana Macroeconomics and Health Initiative

Ghana initiated a process to implement the recommendations of the Commission on Macroeconomics and Health. The results and recommendations of the GMHI are presented in the report entitled *Scaling-up health investments for better health, economic growth and accelerated poverty-reduction*. The GMHI report is the result of a series of consultations, technical papers, workshops and work by experts. It provides appraisals of strategic options and estimates the costs of scaling up health investments.

The GMHI was launched by the President of the Republic in November 2002. The coordination of the GMHI was provided by the National Development Planning Commission in collaboration with the Ministries of Health, Finance, Local Government, and Rural Development, the Ghana Health Service, and other health-related agencies with support from WHO.

All major health partners in Ghana participate in the GMHI, including WHO, the United Nations Development Programme, the United Nations Children's Fund, the Danish International Development Agency, the United Kingdom Department for International Development and the World Bank. An advisory committee was assigned the oversight responsibility, while the technical committee was assigned the task of assessing the GPRS in the light of the recommendations made by the CMH.

The overall goals of the GMHI have been to:

- disseminate and discuss widely in the country the findings and recommendations of the CMH report;
- provide strategic options for scaling up investments in sectors that influence the health status of Ghanaians, in order to have the desired impact on poverty reduction and economic growth in the shortest possible time; and
- mobilize political support and advocacy at the local and international levels to attract more resources to water, sanitation, and health.

Promoting dialogue and aligned goals between ministries of finance, planning and health

The intersectoral composition of the GMHI has ensured that it is consistent with and aligns itself with other ongoing planning activities. The report of the GMHI is designed to provide input into the Ghana Poverty Reduction Strategy and the Ministry of Health Programme of Work, 2007–2011, and uses associated supporting mechanisms and planning tools (e.g. SWAps, MTEF). The National Development Planning Commission is also the focal point for the Ghana Poverty Reduction Strategy.

In its report, the GMHI has indicated that Ghana will need between US$ 35-40 per capita expenditure on health to deliver priority interventions for the attainment of the MDGs. Using projections of

15 Adapted from the Ghana Macroeconomics and Health Initiative, 2005 *(18)* and the country case-study prepared by the WHO Country Office in Ghana.

currently available resources, total additional resources required total approximately US$ 5 billion over the period 2002-2015 (See Table 4). The costed health package consists of priority health interventions, community health planning and services, strengthening health systems, including through human resource development, and access to rural potable water and improved sanitation.

For the health sector it is estimated that a total of about US$ 7.7 billion will be needed for the period 2002–2015 for investment in health delivery and community health planning and services. It is also estimated, on the basis of the two (base and ideal) scenarios, that between US$ 732 million and US$ 850 million will be needed for the water and sanitation sector during the same period.

Table 4 Summary of total costs of public investment in health and water and sanitation, Ghana (2002–2015)

	Total costs
Investments (US$ million)	
Health	7 662.08
Rural water and sanitation:	
Base	732.1
Ideal	850.4
Per capita expenditure 2015 (US$)	
Health (total population)	41
Water and sanitation (rural population in need)	
Base	35
Ideal	41
Average annual costs (US$ million)	
Health	547.29
Rural water and sanitation:	
Base	56
Ideal	68

Source: (18)

Ghana now calls on the international community to accelerate assistance to bridge the estimated financial gap needed from opportunities provided by debt relief, increased aid and new financing mechanisms such as the International Finance Facility. For instance, budgetary savings from the debt relief for highly-indebted poor countries are expected to make available around 2% of GDP over the next years for poverty-reduction expenditure programmes. The GMHI report will serve as an advocacy tool for soliciting commitments and attracting increased resources to health, water, and sanitation sectors and aligning development partners around national health priorities.

Linking planning to budgets

The GMHI report describes the work as an initiative "to provide strategic options for scaling up investments in the sectors that influence the health status of Ghanaians, to develop a long-term investment plan and to mobilize practical support and advocacy at the local and international level". The following aspects of the report serve as a sound basis on which to launch implementation.

- The report is evidence-based in setting priorities, for both health interventions and target populations.
- The report is results-oriented and MDG-based.
- The report is consistent with national health policy and in line with other key poverty reduction processes.

Plans and budgets for the health sector are drawn from the district level with strategic directives and priorities from the national level. The GMHI recommendations are incorporated into the planning

guidelines issued by the National Development Planning Commission to ministries, departments and agencies, and the districts for the preparation of sector and district medium-term plans. This is necessary if the recommendations of the GMHI are to be implemented, for it is only through this process that the recommendations can be captured under the medium-term expenditure framework and budgets.

As part of the health sector reform, Ghana began the development of its five-year Programme of Work in 1997 and has since developed the second Programme of Work (2002–2006). The Programme of Work, which is developed by the Ministry of Health in conjunction with all stakeholders, harmonizes all programmes under the sector for the period. A series of partner meetings (including donor meetings) will be organized to discuss, reach consensus, and provide input into the next Ministry of Health Programme of Work (2007–2011) in order to reach the MDG targets concerning health.

The identification of a clear link between the GPRS and the Government's annual budget was a critical new dimension prompted by the macroeconomics and health process. To build an effective national approach to achieve this objective, the Government has started a broad-based participatory process to create a monitoring and evaluation system involving key national stakeholders, and especially the civil society.

The process to update the GPRS started in September 2004. the cross-sectoral planning groups for the five thematic areas of the current GPRS (2003–2005) have been formed. The role of these groups is to review the current document, validate existing policies, fill gaps that are identified, and reorient the document to reflect relevant national and international policy frameworks including the report of the GMHI.

Way forward: implementation of the GMHI report

Advocacy. In 2006, the GMHI report will be disseminated and used as a tool to sustain political support and advocacy. The report is intended to trigger consultation with stakeholders – including development partners, bilateral donors and civil society organizations – to build ownership, ensure consensus, and support resource mobilization. Finally, the report will be used for international advocacy, serving as a best practice for other countries.

Programming. The recommendations of the GMHI report will be incorporated into the third Programme of Work (2007–2011), and financing options and strategies in the implementation of the recommendations will be developed.

Monitoring. Sustaining the initiative and mainstreaming it into the Government's treatment of issues concerning health will be accomplished through the development of monitoring and evaluation tools of GMHI. In addition, follow-up visits will be carried out in targeted districts to ensure that GMHI recommendations are incorporated in their medium-term plans.

Studies. The follow-up research will include:

- studies on how human resources for health can be marshalled (recruitment, deployment, and retention) to support the recommendations of GMHI;
- assessment of private–public partnership for effectiveness in view of high out-of-pocket expenses on health; and
- evaluation of mechanisms to ensure predictability and sustainability of financial resources to the health sector (less dependence on donors and improved channelling of out of pocket expenses).

More in-depth analysis is required to consider issues of exemptions, benefit packages, the potential for social and private schemes with a limited formal sector, and the scope of community schemes and their potential to be integrated with social insurance in the future.

Finally, two cross-cutting issues need to be addressed – absorptive capacity throughout the system, including acceptance of the new bottom-up service delivery structure from communities, and establishing an adequate health information system to support all planning processes, their implementation and monitoring.

Partnerships. The GMHI findings are being used by the United Nations system to inform the assessment of the health component of the United Nations Millennium Project in Ghana. The report is also used as a reference in preparing the proposal for the United States Millennium Challenge Account which is making US$ 1 billion available to 16 pilot countries as of late 2005. The report will be employed in donor meetings to discuss support for the Health Investment Plan and 'fast-tracking' Ghana towards the health-related MDGs – especially financing options – and to discuss the health share of the recent US$ 4.12 billion in debt relief to the country.

India [16]

The Government of India established a ***national commission on macroeconomics and health*** *in 2004, co-chaired by the Health and Family Welfare Minister and the Finance Minister. The NCMH had the overall objectives to* ***assess the impact of increased investments in the health sector on poverty reduction*** *and economic development of India; and to provide the* ***evidence base to formulate a long-term programme for scaling up essential health interventions****, with focus on the poor. The NCMH report of India describes the economic basis for investing in health, where investments should be targeted, how much it will cost, and how public financing can most effectively cover the cost. The recommendations are based on available baseline information and projections on India's disease profile, and intervention packages designed to reflect minimum treatment and prevention protocols.*

India's National Health Policy (2002) asserts that public health investment in the country has seen a gradual decline from 1.3% of GDP in 1990 to 0.9% of GDP in 1999. Also, of the total expenditure on health (5.2% of GDP), only about 17% is from government spending – with the balance accounted for by out-of-pocket expenditures. Poor households are the most likely to require basic, essential services and the most likely to be pushed into poverty (or deeper into poverty) by out-of-pocket health spending.

The NCMH of India concluded that out-of-pocket health expenses may push 3.3% of India's population below the poverty line each year. In addition only about 10 million people – or less than 0.1% of the population – are covered by health insurance. In response, the National Health Policy (2002) has called for an enhanced funding (specifically, a doubling of public health expenditures to 2.0% of GDP) and an organizational restructuring of the national public health initiatives. It is in this context that the macroeconomics and health work of India commenced.

Creation of the India National Commission on Macroeconomics and Health

The Government of India established a national commission on macroeconomics and health, co-chaired by the Health and Family Welfare Minister and the Finance Minister. The work of the NCMH was initiated in early 2004 with the overall objectives to

16 Adapted from the India National Commission on Macroeconomics and Health, 2005 *(19)*.

- assess the impact of increased investments in the health sector on poverty reduction and economic development of India; and to
- provide the evidence base to formulate a long-term programme for scaling up essential health interventions, with the focus on the poor.

Box 12 lists the terms of reference of the NCMH of India.

Box 12 Terms of Reference of the India NCMH

- To identify the priority areas for health interventions and financing strategies to address those priorities.
- To design a set of essential interventions to be made universally available to the entire population on the basis of public financing (with the requisite donor support).
- To initiate a multi-layer programme of health-systems strengthening, focused on service delivery at the local level including training, construction and upgrading of infrastructure and management development to enable the health sector to achieve universal coverage of essential interventions.
- To suggest critical systemic reforms for removing non-financial constraints to scale up essential interventions and improve their reach and effectiveness.
- To establish quantified targets for reduction in the burden of diseases based on sound epidemiological modelling.
- To identify key health synergies with other sectors (intersectoral linkages).
- To ensure consistency of the strategy with the overall macroeconomic policy framework.

The Commission was comprised of high-level policy-makers and representatives of nongovernmental organizations, academia, and international organizations. The main technical body to assist the NCMH consisted of a small group of health-systems and economics experts. The NCMH technical sub-commission led the development of the research agenda and the writing of the NCMH report.

The report of the India NCMH

The NCMH report provides recommendations to the Government on the ’what, where and how’ of scaling up basic health interventions – What is the economic basis for investing in health? Where should investments be targeted? How much it will cost and how can public financing most effectively cover the cost? These recommendations are based upon available baseline information and projections on India's disease profile, and upon designing intervention packages that reflect minimum treatment and prevention protocols.

In its report, the NCMH estimates the cost of providing different levels (based on comprehensiveness of coverage) of intervention packages and presents actions that the Government can take to improve delivery and financing, especially in assuring that the poor are benefiting from the public investments.

The Commission emphasizes throughout its report that this goal will not be reached solely through public funding and actions. Rather, there must be a coordinated effort among all partners to the Ministry of Health. Specifically, the NCMH identifies the necessity of more effective integration of the private sector and civil society, not only in delivering health care but also in its planning and financing.

Major issues presented in the NCMH Report

Investing in health for economic development and poverty reduction. The Commission presented India-specific data to show the link between poor health outcomes and detrimental economic

impact – both at the macro and the individual/household levels – in terms of decreased productivity. In addition to the impact on life expectancy and productivity, ill health can have significant and catastrophic financial implications for the individual.

Key public health challenges for the future. The NCMH identified four areas that are expected to challenge the ability of the health system to effectively and equitably deliver health services and to challenge the Government to find the resources to tackle them. These four challenges were:

- malnutrition;
- shortage of skilled human resources and appropriate use of technological advances;
- an ageing population; and
- disease burden comprised of re-emerging infections and growing noncommunicable disease rates.

Defining priority health conditions and associated interventions. The Commission undertook a comprehensive causal analysis which identified a set of priority health conditions that account for the vast majority of mortality in India. The three criteria in choosing priority health conditions were:

- health conditions that disproportionately affect the poor;
- probability of health conditions to impose serious burden in future years in the absence of interventions; and
- possibility of health conditions driving large numbers of people into financial hardship.

This priority set of health conditions was matched with key interventions that were both deemed to be technically effective in reducing disease burden and shown to be cost-effective.

Key systemic reasons for suboptimal functioning of health systems. The NCMH identified several areas that constrain optimal health system functioning, which include:

- fragmented responsibilities and misalignment of structure and responsibility in the health sector;
- poor linking of evidence with goal-setting intervention strategies;
- poor capacity in managing and planning resources and implementation at all levels;
- incomplete devolution of authority from the central Government to the states and from the states to the districts; and
- disjointed engagement of the private sector in delivering public health care, without an effective regulatory authority by the Government.

Main drivers of health care costs. First, a properly functioning health-care system requires the availability of an adequate number of skilled human resources, especially at the community level where most people access health-care services. The Commission has stated that this is India's biggest obstacle in reaching its health goals, and that one of the primary challenges to ensuring the availability of a quality health workforce has been the lack of a training and planning division at the state level.

Second, there is suboptimal access to essential drugs and medicines. The Commission asserts that 10 of the highest-selling 25 drugs in the country can be described as non-essential, irrational, or hazardous. This situation has several important implications for the control of pricing, regulation of quality, and patent regulation. Finally, the Commission cites a lack of policies to guide the appropriate and equitable expansion of the use and regulation of medical technology.

Financing essential public health interventions. Public health spending by the health departments of central and state governments totals 0.9% of GDP, with the state governments accounting for the majority of this amount. The majority of the total health spending in the country is from private sources, particularly out-of-pocket fees. The Commission recommends a significant increase in public health spending (to 3% of GDP), and this increase in investment should be devoted to an identified package of essential interventions.

The Commission states that user charges represent a significant proportion of health funding in all states (especially in times of fiscal stress). However, there is a lack of research that sheds light on the impact of user charges on the level of public health demand and mitigates the financial impact of illness on the poor.

The NCMH commissioned such studies in Andhra Pradesh and Maharashtra. The studies highlighted the link between declines in state budgetary support with increased reliance on user fees and the falling number of poor accessing public health facilities. To combat the negative impact of out-of-pocket payments, the Commission advocates the piloting of various financing models to contain costs and to ensure adequate sharing of risks.

The Commission has calculated the resource gap in selected states, to scale up interventions in the health sector and in several health-related sectors. These sectors include education, water and sanitation, nutrition, and transportation. The NCMH also presented several options to fill this gap at the state level in three broad categories:

- reallocation of resources
- generation of additional resources
- improving efficiency of central transfers to states.

A further issue is that the health sector is often accused of the inability to utilize the funds that it is given, which negatively impacts lobbying for additional resources. While the reasons for this are complex, one important factor is the often inflexible and unpredictable budgetary processes. The Commission has advocated for greater decentralization of resource management and planning responsibilities, and for greater flexibility in the process in order to be responsive to changing local needs.

Public–private collaboration and community participation

The growth of the private sector has been phenomenal – partly due to dysfunction of the public health system. But the private sector generally has failed to provide quality care at a reasonable cost. Provision of care in this unregulated sector is technology- and specialist-driven, and is consequently expensive and unaffordable to the majority of people. There is a need not only to formulate appropriate public health laws and regulations, but also to establish institutional mechanisms to govern this sector.

The Commission concludes that efforts for public–private collaboration have been “programmatic, sporadic, disjointed and tentative”, and not integrated into a comprehensive strategy to reach national health goals. On the other hand, nongovernmental organizations have been able to provide reasonable quality care at low cost to poor patients. Although these efforts have been scattered and isolated, the Commission concludes that nongovernmental organizations and community-based organizations can have a positive impact on access, equity, and quality of health care services in rural and other hard-to-reach areas.

Expanded social participation in the management and delivery of health services is a key component of the Commission's vision. In particular, the report calls for the health system to

"demedicalize, democratize and decentralize health-care delivery by having a wider group of people to share the powers, responsibilities and functions", necessitating the participation of civil society groups.

To reach this objective, the NCMH proposal calls for the primary health system to be "embedded within the community". The three community level structures are the Gram Panchayat, Village Health Committee, and Voluntary Workers. The Gram Panchayat are elected local bodies which are able to raise tax revenues to carry out basic public health functions, while the Village Health Committees consist of Gram Panchayat representatives and those of the community (at a rate of one person per every 15 households).

In addition to endorsing the recommendations of the National Health Plan 2002, which calls for giving a proportion of the health budget to nongovernmental organizations, the NCMH recommends funds be given to Village Health Committees in the form of a Village Health Fund to carry out health promotion, delivery of essential health services, and training activities. Further, the NCMH is calling for civil society representation on key health policy institutions.

Financing of health: recommendations of the India NCMH

The Commission identified several areas where there is room for improvement in public health financing, both by increasing public health investment to mitigate the financial risk to the poor of out-of-pocket expenditures, and by strengthening budgetary processes. Its recommendations included the following:

- Public health spending should be increased from the current level of approximately 1.2% (based on the national health accounts framework) to 2.6% to 3% of the GDP to achieve both the MDGs and the targets laid down in the 2002 National Health Plan.
- Experiment with alternative financing models in a few districts for one year to design the new financing system. The shift should be towards the state becoming a financier and purchaser of care.
- To keep premiums low and promote large risk pools, insurance should be made mandatory for all. This should be implemented in phases.
- Increase public investment to primary health care for providing universal access to a basic package of services at Community Health Centres and facilities below it. This will address about 80% of the health needs of the community and reduce household spending on these services.
- Rather than funding specific line programmes, restructure the financing system to fund packages of health care, including core packages, basic health packages and packages for secondary care. Such packages enable the inclusion of preventive, promotive, and curative service provisioning.
- Scale up the investment in public health from current levels to reach 20% of the total public health spending. Initially, allocate at least 50 rupees per capita per year or 5% of the budget (whichever is more) on prevention of disease and promotion of health values and on health information and surveillance units.
- Gradually shift towards a mandatory universal health insurance system for secondary and tertiary care. Carefully examine the substantial evidence available globally on the extensive market failures of private health insurance, particularly in the context of future risk to Government finances. According to this evidence, design the model that would be suitable and sustainable for India's huge population with a limited capacity to pay.

Indonesia[17]

The CMH follow-up work in Indonesia – a country undergoing democratization and accelerated decentralization – has focused upon fulfilling the national health development programme, Healthy Indonesia 2010, and upon achieving the MDGs. The objectives of this work have been to increase knowledge of and Government commitment to health, development and poverty reduction; to carry out timely and ***focused research on resource allocations*** *and financing options; and to enhance the* ***use of existing stakeholder processes to promote pro-poor health policies****.*

Engagement with development partners

Unlike many other countries, the Government of Indonesia did not establish a national commission on macroeconomics and health. The CMH issues have been raised through existing stakeholder mechanisms, including the Partners for Health forum of which the Government and development partners are members. Macroeconomics and health issues have also been raised at meetings of the Consultative Group of Indonesia (CGI), as part of the process of high-level Government engagement with various sectors and stakeholders – including donors, nongovernmental organizations, academics, civil society, and the private sector.

The CGI serves as the main forum for donor coordination and policy dialogue. Chaired by the World Bank and the Government of Indonesia, the CGI meets twice a year to discuss policy and financing needs related to development and poverty reduction.

Within the CGI, a Health Working Group – comprised of representatives of the government and all major donors to health in the country – has proposed areas of collaboration towards reaching a consensus on developing and implementing pro-poor health policies and strategies. Through the Health Working Group, the Ministry of Health and the international donor community in health have developed a shared plan of work.

The overall goal of this shared plan of work has been to fulfil the national health development programme, *Healthy Indonesia 2010*, and the health-related MDGs by making decentralized health systems work – especially for the poor and vulnerable. The stated purpose is to mainstream health into the national development agenda and significantly increase the amount and effectiveness of funding for health through the following strategies.

- Reduction of financial vulnerability to major medical expenses;
- Optimization of the participation of private and nongovernmental organizations health providers in increasing coverage;
- Ensuring a pro-poor institutional environment under decentralization;
- Ensuring sufficient resources to priority health programmes;
- Ensuring access for the poor; and
- Ensuring accountability by local government.

Foci of the macroeconomics and health work

Increase political commitment through advocacy. Since the initiation of the work, extensive information, education, and communication activities have been carried out to raise political commitment to health, economic development, and poverty reduction among policy-makers, the Government, and the public.

17 Adapted from *Macroeconomics and health Indonesia: country profile,* 2003 (http://www.who.int/macrohealth/infocentre/presentations/en/5indonesia_cmh_profile.pdf); WHO Country Office, Indonesia, unpublished data, 2004,; and Michaud, 2005 *(27)*.

An advocacy meeting with national level parliamentarians was held in December 2002 in Jakarta. Subsequently, similar advocacy meetings were organized for provincial parliamentarians. Advocacy at the lower levels of government is particularly crucial in the transition to a decentralized system, because districts are responsible for allocating resources across sectors. Following the initiation of these activities, health was placed on the agenda of the Consultative Group of Indonesia.

Timely and focused research for pro-poor policies. As part of its macroeconomics and health work, Indonesia is in the process of completing several areas of focused research. The purpose of this research is to elucidate ways to better target public spending to the poor, as evidence suggests that the rich capture a larger share of public spending than the poor.

Compared with Indonesia, other countries such as China or the Philippines have achieved better health outcomes with the same or less public spending *(28)*. This finding suggests that there may be inefficiencies in the use of health sector resources, and that productivity may be substantially lower than other countries in the region. Therefore, the link between expenditures and service delivery needs to be studied better.

The research includes a document that both conceptualizes health and poverty and describes the place of health priorities within the poverty reduction strategy paper and an assessment of distribution of health care workers. The country's first national public expenditure review of the health sector was completed and its findings presented.

The purpose of this review is to estimate national health expenditures in the decentralized setting. It identified several major gaps in information, including a lack of distinction between capital and recurrent components of expenditures and a lack of data for carrying out a detailed functional analysis of expenditures. A district level summary of 84 health accounts has been completed, with the objective of strengthening decision-making processes at this level.

A study to measure the burden of disease is planned by the Ministry of Health, in order to facilitate determination of the diseases which should be given priority attention and investment. Finally, a study of external flows into the health sector in Indonesia was conducted to evaluate the level and effectiveness of these funds in meeting priority health objectives.

Accelerate existing initiatives to ensure funding for priority objectives. A number of important initiatives in Indonesia are related to health and poverty reduction. However, these initiatives, could be better integrated within an overall policy framework for providing common direction, for understanding the nature of poverty and health in the country, and for strengthening the health component of Indonesia's poverty reduction strategy. Concerns have been expressed, to the effect that Indonesia's draft poverty reduction strategy paper was not prepared in a consultative manner and that it does not show significant ownership – as poverty reduction is still not an integral part of government planning with clear linkages established to the budgeting process *(29)*.

The way forward

Based on the evidence compiled through macroeconomics and health and other initiatives, the Government intends to develop a medium-term national health-sector investment plan and sub-national investment plans in four provinces. In addition, plans are under way to develop the national health accounts to provide more comprehensive and detailed analyses of expenditure.

In the aftermath of the tsunami and the ensuing large amounts of donor assistance provided to the Government, WHO is supporting a review of specific country priorities. These priorities take into account needs that have emerged following the disaster, with the aim of building pro-poor health systems in the long term.

Mexico[18]

The ***Mexico Commission on Macroeconomics and Health*** *was formed in 2002 to document the case for health investment in reducing the existing disparities in health status and access. The Commission has approached this challenge by using its report as a dynamic document as a basis for dialogue for creating a social consensus in terms of health and development goals, processes and outcomes. The goal is* ***to encourage social involvement in these issues and promote government accountability in equitable access to health and education services.*** *The work of the Commission has focused on the analysis of health financing and social protection, creating an inventory of public goods, adapting the MDGs to the national context and describing the relationship among health, development, and poverty reduction.*

Creation of the Mexico NCMH

The Mexico Commission on Macroeconomics and Health was established in July 2002. The thirty-member Commission includes experts from academic institutions, the Government, civil society, and the private sector. The Commission's mandate consists of:

- analysing the relationship between investing in health and the economic development of Mexico;
- evaluating the extent to which advances have been made in health indicators in the country, the characteristics of Mexico's investment in health (specifically the level, distribution and the share dedicated to public goods), and the system of social protection against adverse health shocks; and
- proposing actions and initiatives, specifically in the realm of public policy, in order to reap benefits for economic development and poverty reduction.

As a middle-income country, Mexico faces a different set of issues from most of the other countries that instituted a macroeconomics and health process. Development and per capita income levels in Mexico are high enough to potentially ensure adequate levels of health for the entire population. However, the health situation is characterized by wide disparities in health indicators among regions and socioeconomic groups. One of the main challenges in Mexico is to transform underperforming health systems into efficient, 'right-sized' and value-delivering organizations.

Documenting arguments and identifying strategies

The report of the Mexico NCMH was developed over the two years following its inception and is based on the papers of its five working groups. One of its primary aims is to compile and analyse evidence towards improving policy-making in the health sector, while also making the case for investments targeted to reducing the large existing disparities in health.

Establishing the link between health, economic development and poverty reduction. The NMCH report establishes the strong relationship between health, economic development, and poverty reduction. Using life expectancy and mortality rates for different age groups, an estimate of the direct relationship between health and growth in Mexico from 1970 to 1995 indicates that health has contributed to approximately one third of long-term economic growth.

18 Adapted from the Mexico Commission on Macroeconomics and Health, 2005 *(20)*, and the country case-study prepared by the Ministry of Health of Mexico.

In addition to the direct effects of health on decreased labour productivity and the economic burden of illnesses, the report presents evidence of the effects of health and malnutrition on education. This link results in intergenerational poverty traps, which prevent the poor from contributing optimally to the economic growth of Mexico. Given the high and growing returns from education in Mexico and the returns from health and nutrition to education and future income at a relatively low cost, evidence suggests that there is a low and systematic underinvestment in health and education. This underinvestment in human capital represents a market failure requiring government intervention.

Adapting the MDGs to the country context. Based on a review of the national health situation, the NCMH examined which health goals should be chosen for Mexico. The NCMH report highlights the need for accelerated progress on improving child nutrition and reducing maternal and perinatal mortality and morbidity, but goes on to look in-depth at the process of target-setting. The report suggests that the final process of defining health goals for Mexico has to arise from a consensus between different levels of government, civil society, and the private sector.

In preparation for this discussion, the NCMH report points out that Mexico needs to go beyond the MDGs, adapting them to the country context. In particular, Mexico needs to consider:

- **moving up the time frame** for specific targets;
- **establishing targets at the subnational level** to ensure attention to the poor, given very high levels of economic inequality and large disparities in health indicators. For example, the poorest municipality of Guerrero has an infant mortality rate of 66.9 per 1 000 live births, which is similar to that of much poorer countries, such as Sudan. By contrast, the Benito Juarez district in Mexico City, with a rate of 17.2, has a level comparable to that of western Europe and Israel. There are also great differences between states in coverage for births delivered under medical supervision: half of the states have coverage greater than 90%, but there are states with coverage lower than 60%. These disparities exist at the municipal level as well.
- **including goals not originally considered in the MDGs** but which are of great importance for countries like Mexico; for example, goals related to chronic illnesses such as cardiovascular problems and diabetes. At the end of the 1970s, diabetes mellitus was the fourth largest cause of death in Mexico, whereas it is now considered the first, causing 12.6% (2003) of all deaths in Mexico.

Analysing health financing. The NCMH considers health investment in Mexico to be too low for a country of comparative level of development and needs. In 2003, Mexico's total investment in health was 6.1% of GDP, lower than the Latin American average of 6.6% (2002) and relatively low compared to other countries with similar income levels. Moreover, the NCMH quotes a 2000 WHO study *(30)* finding that the most severe problem for Mexico at the end of the last millennium was lack of equity in financing mechanisms, since more than half of the population is excluded from social security systems and more than 90% of private health expenditures are out-of-pocket. These payments tend to be greater, as a percentage of total family income, in the poorest households.

Likewise, it is observed that public resources for health are distributed among the population in an unequal manner. Expenditures made in favour of the uninsured population are highly progressive (and pro-rural) and the expenditures benefiting the insured are highly regressive (and pro-urban). The combined effect of the sum of both expenditures means that the distribution of total public health expenditures is slightly regressive on a national level.

However, the difference is still important because the uninsured make up more than 50% of the population and receive less than 33% of total public health expenditure. In addition, geographical

inequities have been noticed in resource allocation resulting from the historical distribution of federal funds, showing a 6:1 difference between the state with the greatest per capita public resources and the state with the lowest ones.

Similar trends have been observed concerning per capita expenditure for insured or uninsured populations by comparing states of different geographical areas or areas with different indices of marginalization. Finally, resources are not used efficiently. In particular, there is underinvestment in preventive health services, with the result that existing resources are not allocated to those items that generate the highest return.

Evidence suggests that public expenditures on health do have an impact on health indicators, particularly in countries where there is good governance. Therefore, the NCMH emphasizes the importance of public expenditures on health as a tool for fairer health financing, more equitable access to health services and greater efficiency of allocations in the sector. As an example, the NCMH cites the Government's human development programme *Oportunidades*, a conditional cash transfer programme which has succeeded in bringing about significant improvements in nutrition and health among Mexico's poorest people.

Making the case for social protection. The NCMH makes the case for a universal health insurance scheme as the most appropriate option to ensure equity and efficiency in the health system. In Mexico, those who face illness when there is no mechanism allowing protection from financial risks face the possibility of falling into a poverty trap.

While increased investment in health contributes to the creation of human capital, insurance can be seen as the other side of the coin of human capital investment. Insurance prevents the deterioration of human capital in the face of adverse health shocks with which individuals or families are confronted – what the report terms “idiosyncratic shocks”.

In Mexico, more than half of the population has no medical insurance. Although the health system has public insurance programmes and plans, coverage is limited and for the most part only basic health services are offered.

The NCMH outlines desirable elements that a health insurance system should provide, such as:

- universal coverage through a single risk-sharing fund;
- a single system with an overall legal and regulatory framework that includes tax-collecting, risk-sharing, and payment for/provision of health services;
- basic coverage is the responsibility of government (private plans would complement rather than substitute basic coverage);
- separation of the functions of financing from those of risk-sharing and providing services;
- a plan with the most cost-effective combination of services should be defined.

Taking an inventory of public goods in Mexico. Protection is also justified against adverse health risks that affect groups of individuals, or systemic risks. An example of this type of systemic risk is an epidemic of a transmissible disease. In this situation, solutions are required that go beyond individual health insurance, underscoring the need to have efficient, equitable mechanisms for the financing and provision of public goods. In this case, government action is generally needed. Public goods in the health sector impact growth through various transmission mechanisms. Public goods can be created through regulations, investing in knowledge and infrastructure, and medical intervention.

Which public goods should be provided? The NCMH report provides an inventory of public goods in Mexico, which is intended as the basis for the development of a hierarchy of public goods in the health sector. This hierarchy is coherent with agreed-upon goals and for adaptation of public investment programs accordingly.

Building a social consensus

The NCMH intends its report to be a dynamic document to serve as a basis for dialogue with a broad range of actors, with the purpose of creating a consensus in terms of health and development goals, process and outcomes. Since the report's publication, the NCMH has focused on disseminating it widely and building a social consensus that will strengthen political will on the economic and social development of Mexico. The report is addressed to civil servants and governments at federal, state and municipal levels – but also to nongovernmental society organizations, the private sector, and academic institutions.

The aim is to encourage social involvement in which citizens insist on government accountability and promote the accumulation of social capital in order to expand access to health and education services; likewise, to encourage public actions to promote equal access to education and health care services, as well as to other basic services.

Strategies for future implementation

The NCMH plans to incorporate the comments received from discussions with various stakeholders to produce a final version of the report. It will work to input the report's recommendations into health and development policy-making.

Nepal[19]

In 2003, a ***Nepal National Commission on Macroeconomics and Health*** *was created as part of an existing National Commission on Sustainable Development. The NCMH is chaired by the Minister of Health and is comprised of representatives from most of the ministries, the National Planning Commission and the private sector. Facing times of political unrest and frequent changes in ministerial staff, the NCMH has* ***promoted district-level investment planning*** *to capture the wide political, economic and geographic variations in the country. The goal of this work will be to cost the scale-up of essential interventions at the district level and to use these plans to negotiate with the Planning Commission and external partners.*

Creation of the National Commission on Macroeconomics and Health (NCMH)

In Nepal, a National Commission on Macroeconomics and Health, part of a National Commission on Sustainable Development, was formed in February 2003. The NCMH is chaired by the Minister of Health and is comprised of representatives from most of the ministries, the National Planning Commission and the private sector. The NCMH identified a number of issues to be addressed in relation to macroeconomics and health work and drew up a plan of action for the preparatory work.

Strategies of the NCMH

Evidence for advocacy: situation analysis. The NCMH supported the building-up of evidence to inform advocacy work and planning for better resource allocation. The first step was the development of a situation analysis (conducted by the Royal Tropical Institute of Amsterdam) and to identify gaps in information.

19 Adapted from Status of Macroeconomics and Health – Nepal, unpublished data, 2006; M. Paalman, 2004 *(31)* and M. Paalman, 2004 *(32)*.

Prepayment of health expenses. In addition to raising domestic and external funding significantly, the analysis suggested promoting prepayment of health expenses and measures to limit out-of-pocket payments. Some relevant studies are being carried out by the Health Economics and Finance Unit of the Planning Division of the Ministry of Health, including pilot projects with social and community health insurance schemes.

Improvement of access to health services for the poor: district approach. Following consultation with stakeholders, it was decided that a district approach would be the best strategy to guarantee access to essential health services to the poor. A district approach aligns well with Nepal's ongoing decentralization process and is appropriate for such a country, which comprises areas of difficult access.

In this context, a desk review of available research was conducted and district health and poverty profiles were compiled for each district. The profiles included major health indicators and targets; indicators on poverty, unemployment and education levels; data on health facilities, human resources and utilization; nongovernmental organizations and donor presence; presence of special programmes; and information on health financing.

District level planning: costing an essential health-care services package. The Ministry of Health has identified and costed an essential health care services package. However, a need has been identified for detailed costing, based on real data, and including attention to scaling up health systems. This costing will be an essential component of the pro-poor district health investment plans. When the plans have been completed, they will be presented to the National Planning Commission for clearance and then to donors, to discuss funding for their implementation. The NCMH then intends to prepare a national health investment plan based on the district plans.

Better coordination between the Government and external development partners. In addition, there is room for better coordination between the Government and external development partners. Although the donors and the Ministry of Health developed jointly the Health Sector Strategy and its Implementation Plan, at present all support from external development partners is organized in the form of programmes or projects and almost all funds go directly to the Ministry of Health or are self-executed by partners.

Future work of the NCMH

This information will input into the production and costing of pro-poor district health investment plans. The plans, which will be adapted to the local situation, will build on and be guided by the existing national health plan, and will feed into upcoming district and national development plans.

It was decided that a national task force would be set up to facilitate the district planning processes, as well as district planning groups. The aim is to build the capacity of districts to plan and deliver essential health services to the poor in line with national health priorities. A workshop of key stakeholders has developed a plan of work and a detailed outline has been prepared for the pro-poor district health investment plans.

The NCMH's work and the development of the pro-poor district health plans continue, though the work has been significantly slowed by an uncertain political situation. An important obstacle has been and will continue to be a stable political environment and sustainable government, including the continuing support of high-level policy-makers who understand the issues and continue to support the process in the country. One important barrier in Nepal has been the frequent changes in staff at the ministerial level during the last few years.

Rwanda[20]

*At the end of 2003, the **Task Force on Macroeconomics and Health** was put in place with the objective of facilitating a country-level process in Rwanda to implement the recommendations of the Commission on Macroeconomics and Health. To achieve its objectives, the Task Force identified **key forums at the central and district levels where policy and development planning activities are conceptualized, developed, and analysed.** The Task Force has been an active member of cluster groups created by donors and the Government of Rwanda to coordinate foreign aid, local government councils, and grassroots political organizations responsible for determining local population priorities. **Targeted research topics** have been identified to provide evidence in support of **knowledge sharing and transfer**.*

Needed public health financing reforms

The health care system in Rwanda is heavily dependent on foreign assistance. The national health accounts indicate that in 1998, 50% of health expenditures were covered through foreign aid. Households and the private sector paid about 40% of the expenditures, mostly as out-of-pocket fees. Government health expenditures accounted for only approximately 10% of the country's total health bill. Although public sector health spending has increased, households still bear a significant burden of financing health care. In 2002, the private sector – including households – paid 42% of the health expenditures, donors covered 33%, and the public sector 25%.

In 1996, Rwanda had reintroduced user fees – which led to a drop in consultations to 23% by 2001. With a significant proportion of health expenditure paid for by households as out-of-pocket fees and poverty prevalence at 60.3%, low- and middle-income populations are vulnerable to poverty. In an attempt to reduce financial vulnerability, the Government initiated pilot health-service payment schemes several years ago, in order to:

- improve the ability of the population to afford care;
- improve the quality of care; and
- strengthen and encourage community participation in health activities.

In 2004, the Ministry of Health mandated that all Rwandans join health payment schemes. To date, about 40% of the population are enrolled in *Mutuelles de Santé*. Although surveys conducted in areas covered by health payment schemes have shown a 40% increase in the demand for health services from members of *Mutuelles de Santé*, other issues such as quality of care continue to create a barrier to access to care.

Development processes to reach the Millennium Development Goals

Since 1998, the Government has carried out various reforms and processes to stimulate the economy and reduce poverty. Two of these processes – the development of the Health Sector Strategy Plan (HSSP) and the Poverty Reduction Strategic Paper (PRSP) – are described below.

Health Sector Strategic Plan. The process of developing the HSSP began at the end of 2003, and the Plan was adopted in February 2005. The plan was developed using a bottom-up approach: several consultations took place at central and peripheral levels, and donors and partners were also consulted. More importantly, input was sought from ministries related to the health sector, as dictated by the sector-wide approach. In particular, the Ministry of Finance supported the process by producing a

20 Adapted from *the Rwanda Macroeconomics and Health Project Country Report,* prepared by Diafuka Saila-Ngita, Columbia University, and the Rwanda Task Force on Macroeconomics and Health. 2005.

guideline in 2003 – a starting point in the initial process to create a mechanism of collaboration between the two sectors.

The HSSP covers the period 2005–2009, and defines priority objectives and interventions to tackle health issues in order to reach the MDGs. The plan estimates the cost of the activities to be undertaken, including a monitoring and evaluation framework as well as an estimate of the resource availability from the Government and the donor community based on existing and anticipated commitments.

Poverty reduction strategy paper. The PRSP was finalized in June 2002. To develop a process by which households can meet their basic needs in food, shelter, health, knowledge, and security, the paper analysed the determinants of poverty in Rwanda using quantitative surveys and discussions with various stakeholders. It helped set the Government's development goals: reduction of poverty prevalence to 25% by 2015, increase of the real GDP per capita to above US$ 900, and increase of life expectancy to 65 years. The PRSP helped to establish a strategy to reach these goals by:

- increasing household income through improved commercialization and transformation of agricultural commodities;
- investing in human capital and empowering women; and
- improving the effectiveness of the public sector.

The Task Force on Macroeconomics and Health

The purpose of the Task Force. At the end of 2003, with technical assistance from Columbia University, the Task Force on Macroeconomics and Health was established. The objective of the Task Force was to facilitate a country-level process in Rwanda to implement the recommendations of the CMH, applying economic and health principles to improve the health care system.

The structure of the Task Force. The Task Force is administratively attached to the office of the Secretary General of the Ministry of Health. The president of the Task Force is adviser to the Minister of State. The Task Force works closely with and supports the Directorate of Strategic Planning and Poverty Reduction Monitoring of the Ministry of Finance and the Planning Unit at the Ministry of Health. The Task Force is made up of technicians from various ministries, public institutions, donor organizations, academia and nongovernmental organizations, and a representative of WHO.

Task Force strategy and activities. To achieve its objectives, the Task Force identified key fora at the central and district levels where policy and development planning activities are conceptualized, developed, and analysed. Among these forums are cluster groups (described below) created by donors and the Government to coordinate foreign aid, local government councils, and grassroots political organizations at the cellule level responsible for determining local population priorities. Targeted research topics have been identified to provide evidence in support of advocacy activities and also inform the actions of the Government and its partners.

Establishing mechanisms for donor coordination

Several development partner meetings highlighted the need for establishing mechanisms to coordinate interventions undertaken by the Government and its partners in order to increase efficiency, avoid duplications and strengthen the intersectoral approach to development. For this reason, several coordination bodies have been created.

The Development Partners Coordination Group (DPCG) was created in November 2002 as a forum for the coordination of international assistance, charged with the responsibility of harmonizing development programmes in order to avoid duplications, and of monitoring the

implementation of the PRSP. It is supported by two technical advisory groups, Harmonization and Alignment in Rwanda of Projects and Programmes, and the Budget Support Harmonization Group.

Eight cluster groups (including a health cluster) have been created to discuss coordination issues and propose actions related to a specific sector: each of them provides guidance for a better coordination of donors' assistance emphasizing the sector-wide approach strategy. The DPCG is also called to oversee the cluster groups.

The health cluster group has been very active since the end of 2004. It meets bi-monthly under the leadership of the Secretary General of the Ministry of Health, while Coopération Technique Belge (CTB) assumes the secretariat. The overall roles of the health cluster group include technical work and coordination of partners' interventions. Representatives of the Task Force on macroeconomics and health actively participate in this group. Seven technical working groups were created to implement the technical work of the HC.

1. The **contractual approach** group, led by CTB, is working on defining a more comprehensive, output-based financing approach in health centres and district hospitals and supporting the national implementation cell policy development and evaluation. This working group is analysing the experience from four pilot projects experimenting with the contractual approach strategy: the CTB project, the German Technical Assistance Agency (GTZ) project, the CORDAID project, and the HealthNet Project.
2. GTZ leads the *Mutuelles de Santé* working group, dealing with issues related to the implementation of the *Mutuelles de Santé.* In March 2005, this working group cosponsored – with the Task Force on Macroeconomics and Health – a workshop that focused on sharing information among stakeholders, estimated the need for foreign assistance to sustain the *Mutuelles*, and identified studies to support its implementation.
3. The United States Agency for International Development leads the working group dealing with the issues of integrating **HIV/AIDS programmes** into the health-care system.
4. The **human resource** working group is led by CTB, and studies issues related to human capital investment.
5. The **disease control** group supports the assessment and the coordination of programmes related to the prevention and treatment of disease.
6. The intervention **mapping group** has collected data on donor interventions along the axes of the Health Sector Strategic Plan and geographic lines to facilitate government and donor alignment with the HSSP. WHO leads both the disease control and the interventions mapping group.
7. A seventh group on **family planning** has recently been added.

Way forward

Progress has been made in the last several years. In terms of resource allocation, the Government of Rwanda allocated 8.2% of its budget to the health sector in 2004, still significantly below the 15% target needed to reach the MDGs. Households still bear a significant burden of financing health care and – in response to this circumstance – an administrative unit in charge of guiding and monitoring the scale-up of *Mutuelles de Santé* enrolment has been established.

Moreover, a policy to guide the performance-based financing approach is being developed. The national health accounts exercise is being institutionalized, and the development of a human resource strategy is in progress. Furthermore, the mapping exercise of health interventions and the public expenditure review exercise are under way.

The Task Force on Macroeconomics and Health expects to increase its analytical capacity by bringing in new members from other ministries and academia. It contributes to the development process in Rwanda by creating an environment that a country with limited human resources in policy development and analysis can use to share available expertise across ministries and departments.

Thus, the Task Force is a resource for the Government – not only to advocate for macroeconomic and health principles, but also as a forum for knowledge sharing and transfer. For the biennium 2006–07, the Task Force intends to improve its expertise and focus its activities on monitoring and evaluating activities defined under the HSSP and the PRSP and advising the Ministries of Finance and Health on matters at the intersection of health and economics.

The Ministry of Health has expressed the need to continue the macroeconomics and health work to provide evidence-building and technical assistance for health system strengthening and capacity-building. The Government is preparing a proposal towards the institutionalization of the CMH work, including the recruitment of national technical staff to manage the initiative.

Senegal[21]

Senegal is now taking forward an initiative to create synergy among various health, development and poverty reduction activities and to ensure that the activities among partners serve to strengthen the Programme National de Développement, the sector-wide plan for heath development. The focus of the health and development work has been to ***enhance the Ministry of Health efforts in aligning partner priorities with national priorities and to reduce fragmentation*** *of health policies. In addition, there is a special focus on the analytic and technical capacity of the Ministry of Health.*

Promoting a policy dialogue on health investment

The health and development work in Senegal has supported efforts to draw attention to the relationship between ill-health and poverty and to advocate for increased investment to expand access to primary health care. A mechanism, co-chaired by the Ministers of Health and Finance, was set up in 2002 to facilitate a policy dialogue on health investment among ministries that deliver inputs for health. A technical committee was formed to coordinate the activities, consisting of one representative each from the Ministries of Health, Finance, and Planning.

Building on work coordinated by the mechanism and that of other health and development initiatives, Senegal is now taking forward a pilot project to create a synergy between various approaches to health, poverty reduction, and economic development, ensuring that integrated activities by all partners serve to strengthen the sector-wide approach or Programme National de Développement Sanitaire (PNDS) – the national plan for health development. Support by WHO and partners aims to enhance the efforts of the Ministry of Health to improve management of health investments at all levels, including better integration of external aid with national priorities towards poverty reduction and achievement of the MDGs.

To strengthen the dialogue between the Ministries of Health and Finance, a pressing need was identified to enhance analytical capacity within the Ministry of Health, including through macroeconomic tools to analyse the impact of public investments in health on poverty and health indicators. Advocacy material has been drafted, but more evidence is still needed to support advocacy for increased resource allocations to the health sector. Because the production

21 Adapted from A. Kébé, *Senegal: health, poverty reduction and economic development – case-study* (Geneva, World Health Organization), prepared for the Learning Network for Programme Based Approach Spring 2005 Forum; J. Toonen (4); and from *Diagnostic de la Situation Nationale Macroéconomie et Santé*, prepared by Moustapha Sakho, national consultant, Ministry of Health, Senegal, 2005.

process in Senegal is labour-intensive, the steady GDP growth observed over the last ten years relies much on the productivity of labour, to which health and nutrition are key inputs. Collecting evidence on this link would reinforce requests by Ministry of Health for increased resource allocations.

Reducing the fragmentation of health through multi-sectoral evidence building and planning

In Senegal, approximately fifteen public entities other than the Ministry of Health deliver services for health. These include the Ministry of Education, Ministry of Armed Forces, and the Ministry of Youth Development and Sports. This fragmentation of health activities has given rise to a recognition of the need for more intersectoral collaboration and implementation of a process for planning at the district level. The approach in Senegal has thus been based on the establishment of a multisectoral platform to collect and coordinate information on the health activities of other ministries, the private sector and nongovernmental organizations. A key information gap in Senegal is the absence of a reliable framework for documenting public resource allocations for health in this fragmented context.

To support the building of evidence following a request from national authorities, in 2004 WHO engaged the Royal Tropical Institute of Amsterdam to conduct a detailed analysis on the relationship between poverty and health, as well as health financing. The analysis examined how the national health plan could be strengthened, taking into account linkages with other programmes and initiatives such as the MDGs, the New Partnership for Africa's Development, and the PRSP.

The objective of the analysis was to identify gaps in information. This work was continued by a national consultant to complete the institutional diagnostic. The analysis recognized a number of constraints to absorption capacity of the health sector, and identified opportunities to mobilize increased funding for health and reach poverty pockets more effectively, including public-private partnerships and insurance schemes.

A more detailed analysis at the district level, based on data on disease burden, poverty and resources for the health sector, will support improved planning of health care delivery in the context of the sector-wide approach. Support is planned to develop the national health accounts, and a working group has been set up to this end.

In Senegal, efforts towards implementation of this work have aimed to strengthen ongoing processes, such as the PRSP and the PNDS, towards improved management of health sector resources. The ultimate aim is to prepare a plan of action for a long-term national health investment plan, which should support the national health plan by ensuring a focus on the poor to further improve health results.

Opportunities to strengthen poverty reduction efforts and donor 'buy-in'

All stakeholders need to agree on sectoral policies and strategies, develop a medium-term financial plan, and set an agenda for institutional reform and capacity building. For example, the absence of a budget link between the PRSP and the PNDS is a major obstacle for developing an integrated package of priority interventions to reduce poverty. The contribution of health to poverty reduction needs to be clearer in the PRSP, and a closer collaboration between PRSP formulation and implementation and the health sector development strategy is envisaged. Meanwhile, the Ministry of Finance is undertaking reform of public expenditure management, aiming towards resource allocation based on quantified targets, and the Ministry of Health is piloting the medium-term expenditure framework.

Senegal is a pilot country for the Millennium Project, but there is no connection between the costing methodology used by the Project and the expenditure framework used by the Ministry of Health. The sector-wide approach is not yet fully operational, and donors continue to earmark funds. In fact, absorption of donor funds is extremely low at 30%, indicating the need to address constraints to the effectiveness of donor aid.

The project implementation document has been formulated and validated, along with the institutional diagnostic, by representatives from the Ministries of Finance, Planning, and Health and development partners.

An intercountry workshop in Dakar facilitated discussion on how to increase the visibility of health, strengthen the policy dialogue, build internal partnerships, and develop country capacity. The workshop served as a forum of exchange of lessons and best practices towards expanding the process to other countries, as well for identifying technical and financial needs and how countries can best be supported. Participatory workshops are being held by the Minister of Health in two of the poorest districts in Senegal. In order to link policy with operational level practices, pilot exercises will be carried out in these two districts.

Sri Lanka[22]

*The **Sri Lanka National Commission on Macroeconomics and Health** was created in 2002, co-chaired by the Minister of Finance and the Minster of Health. Building on Sri Lanka's well-known success in achieving high health status in a resource-scarce setting, the Commission set out to **advise the Government and the Minister of Health on increasing investments in health** and ensuring the optimal contribution of the health sector to economic development. The Sri Lanka NCMH released their report this year addressing several key issues including **health resource allocations to tertiary versus primary health care settings, health financing and inefficient human resource planning.***

Creation of the National Commission on Macroeconomics and Health

The creation of the Sri Lanka NCMH in November 2002 was built on a number of efforts by the Government of Sri Lanka to improve the performance of health services. In 1996 and 1997, the first National Health Policy and the Presidential Task Force Report on Health Policy, respectively, defined several objectives for the health sector and provided recommendations to improve the responsiveness and equity of the health system. More recently, in 2001, Sri Lanka launched *Vision 2010* (a new plan for accelerating the economic development of the country with ambitious macroeconomic and sectoral goals) that included several health goals and was the foundation for the poverty reduction strategy paper *(Regaining Sri Lanka report)*.

Finally, the Sri Lanka Health Master Plan (2003) provided a strategic framework for improving the health system by 2015, which was structured around the five following strategies:

- ensure delivery of comprehensive health services which reduce disease burden and promote health;
- empower the community to maintain its health;
- improve human resources for health development and management;
- improve health financing (mobilization, allocation, and utilization of resources); and
- strengthen the stewardship and management functions of the health system.

22 Adapted from *Economy and health: taking Sri Lanka towards the global best* – draft report of the Sri Lankan National Commission on Macroeconomics and Health . Ministry of Healthcare, Nutrition and Uva-Wellessa Development, Colombo, Sri Lanka (forthcoming), and L. Currat, 2004 (33).

These plans were the foundation for the establishment of the Sri Lanka NCMH, highlighting the need for a broader dialogue for health and its relationship to development and a comprehensive look at policy options for improving domestic and external investment in health.

The Sri Lanka NCMH is an intersectoral high-level body, co-chaired by the Minister of Finance and the Minister of Health, with representation from the Ministry of Agriculture together with representatives from the Central Bank, the United Nations, academia, nongovernmental organizations, the private sector, and others. To support the work of the Commission, a planning committee and two working groups were set up, as well as a secretariat located in the Ministry of Health.

Objectives of the NCMH

The overall objective of the Commission (as described in the NCMH report) is to raise high-level political awareness and commitment to increased spending on health and to tackle systemic and institutional constraints to enable the effective delivery of health-care services to the poor.

The terms of reference of the NCMH are broad, and encompass the responsibility for advising the Government and the Minister of Health on all aspects related to increasing investments in health and ensuring the optimal contribution of the health sector to economic development and fighting poverty. They are formulated to:

(a) advise the Government and the Minister of Health on all broad policy issues, policy options and directions in relation to investments in health, both in the public and private sectors so that health could make an optimal contribution to development of the country;
(b) recommend new approaches and strategies for scaling up health interventions, particularly those aimed at the poor, and increasing investments in health;
(c) commission appropriate studies in different aspects of macroeconomics and health that will support the work of the Commission;
(d) recommend modalities for mobilizing increased external resources for health development and to advise on broad policies and strategies for their optimal utilization;
(e) advise the Minister of Health on all aspects related to economics and health for overall health and human development in Sri Lanka.

The basis of the work is the acknowledgement that it is not just a matter of economic growth, but more a matter of how health resources are organized and spent. The work cited Sri Lanka's success in achieving levels of life expectancy at birth which are comparable to high income countries, in spite of relatively low per capita GDP.

Strategies of the NCMH and first results

Although it is too early to judge the **concrete results** of the work of the NCMH in terms of increased financial resources for health, improved efficiency and improved access by the poor to effective health care, the efforts of Sri Lanka in the field of macroeconomics and health since the creation of the NCMH in November 2002 have been remarkable in many ways.

- It was among the very first countries to make the decision to create a national commission on economics and health, with a unique role to play in:
  - filling a knowledge gap with respect to health economics in Sri Lanka;
  - filling an institutional gap, i.e. bringing key actors together at the national, provincial, and district levels;
  - filling a gap in international partnerships, i.e. linking up with international efforts in the fields of economics and health; and

  - monitoring its impact on increased resources for health, greater efficiency, and effectiveness in health delivery and better health for the people – particularly the poor.
- It created an effective governance structure with the setting up of the Planning Committee, the Working Groups, and the Secretariat.
- It built an apparent consensus in broad circles of the Government and public opinion regarding:
  - the key role of health for economic development and fighting poverty; and
  - the importance of increasing public investments in the health sector.
- It contributed to the international debate on macroeconomics and health.

More specifically, the following results were obtained by the NCMH in its first three years of activity utilizing the five strategies discussed below.

Evidence building (economic studies, focus group discussions, and working groups). In the first meeting of the NCMH in December 2002, the issues in the field of economics and health that were identified by the participants as requiring urgent attention were the:

- drastic drop in funding for preventive health services;
- need to develop some mechanisms to minimize hospital admissions;
- efficient utilization of peripheral services;
- prevention of wastage of drugs;
- need to identify new financial resources (e.g. earmarked tax, paying wards, community financing); and
- need to make more efficient use of human resources.

To further enlighten these issues, the NCMH also organized 27 focus group discussions covering four provinces and a population of about 6.2 million people. The focus groups were comprised of community members, patients, doctors, health workers, pharmacists, public health inspectors, teachers, and members of CSOs. They focused on a large number of issues – such as disease burden; human health resources; access to care; health facilities at the primary, secondary, and tertiary levels; health costs; and preventive care – and made specific recommendations to increase efficiency in all of these fields. Finally, the NCMH instituted two permanent working groups, one on health-financing issues (out-of-pocket expenditures, social health insurance, hospital-based revenue generation, community financing, and earmarked taxes), and the other on budgeting issues (cost analysis of public health-care interventions).

Advocacy. The NCMH undertook a varied programme for advocacy, including:

- presentations at the level of the National Health Council and National Health Development Committee;
- disseminating messages to the mass media;
- seminars for politicians (central and provincial levels);
- publication of a newsletter; and
- developing a web site for community-wide distribution.

Participation in international meetings. Under this strategy, the objective is to share the country's experiences in the field of economics and health and benefit from international experiences.

Publication of the 2005 NCMH report. The objective of the report is to review the health economic issues in the country and provide strategies to address the problems. Following the publication of the report, a national consultation is foreseen.

National Health Investment Plan. A number of important documents have been prepared in recent years identifying the main priorities in the health sector. In 2005, the NCMH plans to finalize the National Health Investment Plan on the basis of these early documents, including the NCMH 2005 report.

Challenges for the future

According to the NCMH 2005 report, Sri Lanka will be confronted with the following health issues in the coming years.

Health care financing. The immediate issue for Sri Lanka is to maintain and build on its health system achievements in an environment of low government health expenditures and high out-of pocket expenditures. Having achieved a relatively high life expectancy, Sri Lanka will be faced with finding the resources to take care of a growing elderly population in the coming years. The NCMH has recommended that the public sector invest at least 2.5–3.0% of GDP in health (while private spending would continue to amount to 1.5–2.0% of GDP) and that steps be initiated to develop a health insurance system to decrease the inequities linked to the high level of out-of-pocket expenditures.

Health resource allocations. Sri Lanka's health resource allocations have not responded to the current needs of the country, including:

- the epidemiological and demographic transitions that will necessitate more expensive interventions;
- damaged infrastructure due to years of war;
- the breakdown of preventive and promotive services;
- unavailability of supplies, medicines, and equipment in public facilities – especially in rural areas; as well as
- the destabilizing impact of the recent tsunami. (According to the NCMH report, “health infrastructure damage due to the tsunami, affecting about 5% of the country's population, is equivalent to about one-fifth of the country's annual health budget”.)

Overcrowded tertiary hospitals and neglected primary facilities and prevention. Another issue involves the fact that, over the last decade, Government spending on inpatient services has gradually increased while at the same time spending on preventive care has steadily decreased. Similarly, hospital services accounted for 73% of actual health-care expenditures in 2004, while public health services accounted for only 4%. This discrepancy is reflected in overcrowded tertiary-level hospitals and neglected primary facilities.

Lack of coordination between central and district levels. Concerning organization and management of the health sector, the NCMH found a lack of coordination between the central and district levels and between the public and private sectors. It is noted that the decentralization of the responsibilities of health-care services has not been matched by decentralization of the financing of health care. Districts are still very dependent on the central Government for financing.

Insufficient planning of human resources. Another major issue for Sri Lanka involves the shortage of qualified staff (particularly nurses, pharmacists, and paramedics) and the distribution of staff to remote and conflict areas. According to the NCMH 2005 Report, there is a lack of comprehensive human resource strategy and lack of coordination among all units of the Ministry of Health. The NCMH recommended that that there should be closer coordination among the ministries responsible for the production, employment, and utilization of physicians in the country.

Yemen

In Yemen, the Ministry of Public Health and Population – together with its stakeholders – contributed to a ***comprehensive strategic plan for the country, through a five-year development plan*** *(which is MDG-based and poverty reduction-oriented). As a crucial step to align policy with the MDGs, the Government embarked on the MDG needs-assessment process, as promoted by the Millennium Project in August 2004. Having a similar objective involving an investment plan for health, Yemen's initiative to build on the CMH process* ***strengthened the Government's capacity to complete an MDGs needs assessment and the costing of health strategies*** *and provided the opportunity to coordinate these efforts.*

Yemen affirmed its dedication to achieve the Millennium Development Goals and therefore joined the United Nations initiative to help the least developed countries in the MDGs process through the Millennium Project. However, the attainment of the targets is uncertain given the current status of economic growth, investments, and the development challenges faced by Yemen.

Increasing capacity and intersectoral coordination to reach the MDGs

Aware of the limited institutional capacity and the need for international assistance to reach the health and health-related MDGs, the Ministry of Public Health and Population – together with its stakeholders – contributed to a comprehensive strategic plan for the country through a five-year development plan (which is MDG-based and poverty reduction-oriented). As a crucial step to align policy with the MDGs, the Government embarked on the MDG needs-assessment process as promoted by the Millennium Project in August 2004.

The resulting sectoral investment plans were consolidated into a national plan with guidance from the Ministry of Planning and International Cooperation and technical assistance from the United Nations country team and specialized agencies *(34)*. Having a similar objective of an investment plan for health, Yemen's initiative to build on the CMH process supported the MDGs needs assessment and costing of health strategies and provided the opportunity to coordinate these efforts.

Between August 2004 and June 2005, Yemen formulated MDG-based health strategies and finalized the costing process of these strategies as an input into long-term national policy (2006–2015) and the medium-term health sector plan (2006–2010), which is currently being finalized. The medium-term health sector plan will be integrated into the five-year Development Poverty-Reduction Plan. The Ministry of Planning and International Cooperation coordinated the exercise and set up five thematic working groups, including the Health and Population Working Group.

The Ministry of Public Health and Population directed the working group on health and population[23], which includes technical expertise from the Ministry and representatives of development partners. It is chaired by the Under-Secretary for Planning and Development and co-chaired by WHO. Despite the challenges encountered during the MDG needs assessment process and the ambitious costing approach, the Ministry of Public Health and Population was able to present results that strengthened its relation with the Ministry of Planning.

It proved crucial that the internationally-advocated planning exercises were linked to national health sector planning to avoid duplication of efforts by the ministries and to respond effectively to the need for technical and financial support in national planning. The currently-ongoing planning exercise was therefore linked to the MDG exercise (long-term policy plan and medium-term development plan) and used the opportunity to start the review and revision of the 1998 Health Sector Reform strategy.

23 The technical working group on health and population was further divided into three topics: communicable diseases (HIV/AIDS, TB and malaria); child, maternal and family health; and health systems. An important achievement of the latter is that it brought together the various departments involved in health systems development in the Ministry of Public Health and Population for the first time.

Promoting dialogue and aligned goals between the Ministries of Finance, Planning, and Health

During the MDG needs assessment exercise, the Ministry of Public Health and Population mobilized all directors and relevant technical staff to participate in three working groups to start the needs assessment. The working groups agreed on the objective of the MDG exercise, linkages with the national processes and mechanisms, broad strategies, main interventions, and health systems constraints that need investment. This can be seen as a response of the Ministry of Public Health and Population to the need for strong political leadership to coordinate that ministry with governorates, and multilateral and bilateral partners – as well as the private sector – around a common set of indicators and targets.

Furthermore, it is important that the health sector in Yemen is better understood by the Ministries of Finance and Planning in terms of the complexity of the health system and its financing. For instance, the budgeting and disbursement systems are largely controlled by the Ministry of Finance and currently do not promote decentralized planning and service delivery as suggested by the health strategies and plans. A health investment plan is a crucial step towards making current gaps and inefficiencies visible and integrating health planning with overall development planning.

Establishing mechanisms for intersectoral coordination

Collaboration among the ministries to work on cross-cutting development issues and strategies is weak. However, improvements in the health sector depend on good linkages among education, family health, HIV/AIDS, nutrition, and water and sanitation, which are crucial to work towards achievement of the health and health-related MDGs (A. Singh, unpublished data, 2005).[24]

The needs assessment has provided a platform for intersectoral work, not only between various health departments but also with other sectors. The involvement of the Ministry of Planning and International Cooperation in coordinating the exercise across sectors revealed a need for further strengthening of its role in broader government reform issues – such as civil service reform and financial reform, as well as the implementation of strategies across the various line ministries.

The cost of scaling-up interventions

The MDGs needs assessment for the health and population sector has been introduced by the Ministry of Public Health and Population as a roadmap for its development efforts for the coming ten years. The plan provides a vision complemented by a practical guide with its investment requirements to achieve the health-related targets of the MDGs in Yemen by the year 2015.

The Health and Population Working Group has followed a three-step approach to cost the health MDGs. First, priority interventions and targets for reaching the health MDGs were identified by the end of December 2004. Second, this package of health services, including health system development, was costed.[25] Third, this health costing was incorporated in the overall Yemen MDG needs assessment.

As the next step, in June 2005 the Ministry of Public Health and Population developed a medium-term health sector plan for 2006–2010, for integration into the Government's five-year Poverty Reduction and Development Plan *(35)*. However since no financial strategy was developed, and an unclear resource envelope was identified, the Ministry had to consider non-MDG targets for Yemen in its five-year development plan.

During this process, the Ministry identified national priorities which kept the MDGs and the poverty reduction strategy as guiding principles. These priorities included human resources; health

24 Singh A. *Health and poverty component of the national health policy and five year plan.* Geneva, World Health Organization, unpublished data, 2005.
25 In January 2005, the costing models for the health MDGs in Yemen were developed as the basis for the costing exercise. This was a technical assistance input from WHO in coordination with major programme components of MDGs. After information on the major cost inputs and disease profiles was collected in close cooperation with the Ministry of Public Health and Population, the needs assessment costing was finalized in March 2005.

information; maternal and child health; targeted diseases, including those which are vaccine-preventable; blood safety; emergency medical services; and health promotion/education.

The focus on health MDGs for the health component of Yemen's national development plan is relevant, since it covers an important share of the disease burden. However, the costing would need to go beyond the health MDGs to reflect the burden of noncommunicable diseases as well as injuries and violence prevention.

The team began its work using the Millennium Project models. It was decided that the Millennium Project costing models for the MDGs were limited, as they were built on already-existing models (e.g. the safe motherhood programme of WHO) and lacked the health system components.

Cost-effective interventions for health were selected and costed for:

- attaining a two thirds reduction in under-five mortality (currently 101.9/100 000);
- a three quarters reduction in maternal mortality (currently 361/100 000);
- combatting malaria and TB;
- reversing the spread of HIV/AIDS; and
- providing access to affordable drugs in 2015.

Moreover, health systems development needs were included in the costing. These include health information/research, management monitoring and evaluation, human resources, and prioritized infrastructure. Limitations were explained in terms of the data sources, capacity, and methodology.

The definition and costing of priority health interventions, health infrastructure, and health systems (2006–2015) provide the following cost estimates *(35)* under the assumption of a maximum acceleration scenario of 100% coverage by 2010 to achieve the MDGs, with no inflation (see Table 5).

Table 5 Cost estimates for priority health interventions in Yemen

Intervention/line item	Total cost (2006–2015) (US$ million)	Average cost per capita per year
100% coverage for six maternal health intervention areas[a]	756	2.83
100% coverage of child health (infant and under five) for immunization and eight other interventions that cause 80% of childhood deaths (IMCI package and other)[b] at both health-care centre and hospital levels	1 325	4.91
50% reduction in malaria incidence through ITN, malaria treatment and vector control	621	2.28
100% coverage of TB treatment (DOTS)	93	0.34
HIV/AIDS interventions in prevention, ARV and treatment of opportunistic infections	364	1.32
Health facilities (construction, upgrade and maintenance)	1 571	6.22
Staffing (salaries and training)	5 887	22
System strengthening (management, monitoring and evaluation, health information system, community demand)	3 517	13.23
Sum of total annual costs (2006–2015)	14 134	53.52

[a] *Family planning, provision of antenatal and delivery care, management of obstetric complications, other maternal complications, newborn interventions and management of sexually transmitted infections.*

[b] *Children more than two months: acute respiratory infection, diarrhoea, fever (more than 60% expected to be malaria), ear problems, malnutrition, anaemia. Children under two months: diarrhoea, bacterial infection and feeding problem/low weight.*

Source: Adapted from Health and Population Technical Committee and Health and Population Thematic Group, Ministry of Public Health and Population Planning and Development Sector, Yemen *(35)*.

The costing, based on reaching MDG targets by 2015, was completed in March 2005 through an iterative process. That process resulted in a needed investment of US$ 53 per capita. This figure comes close to the initial estimate by the CMH (US$ 40), and further cost estimates by WHO (US$ 60), that take into account the costs of health systems. Nevertheless, the costing should be considered a very rough estimate due to the very limited availability and quality of epidemiological[26] and health-management information data. Taking into account the major investments still needed in both programme and health systems development, the average investment per capita required might be even higher than the estimates suggested.

For 2006, the total costs to scale up towards the health MDGs are estimated at US$ 923 million. These annual total costs would increase every year, to US$ 1679 million in 2015. The 2006 estimate is substantially higher than the 2003 health expenditure by the Ministry of Public Health and Population of US$ 174 million *(35)*. It is also higher than the total health expenditure in 2003 of US$ 580 million[27], which includes private and extrabudgetary funding for all of the health sector. However, due to the limitations of the Millennium Project model, savings derived from synergies – both within health sector and across sectors – and poverty-oriented needs assessment were not factored.

Due to restrictions upon currently-available funding and various constraints upon health systems (particularly at the district level) such as a lack of human resources, a lack of disaggregated health and financing data, and low coverage of health facilities, it seems clear that the MDG scenario scaling-up – even with a carefully phased planning – is ambitious. However, in addition to producing a quick estimate of the investments required to meet the health MDGs in Yemen for long-term future targeting and advocacy, this scenario was also meant as an input for the more elaborate planning and budgeting process for Yemen's 10-year strategic vision and the five-year national Poverty Reduction and Development Plan.

Future strategies

As a next step, it will be important that the Ministry of Public Health and Population and its development partners commit themselves to a package of essential interventions which can be realistically provided. These interventions must consider the current infrastructure and funding and include careful planning of health systems development.

Accordingly, the Ministry is currently embarking upon the costing process for the health component of the five-year National Poverty Reduction and Development Plan. This costing requires an adaptation of MDG costing to more realistic scenarios, both for delivering the envisaged interventions to the district level and for setting targets.

Further in the future, international partners needs to be convinced to provide more basket funding and general budget support. To ensure adequate use of funds, international partners would need to provide more institutional support to the Ministry of Public Health and Population so that it can assume its leadership role in aligning the support to priorities and in tackling a substantial part of health systems development process in the coming years.

Consolidating the findings of the various sectors will also provide an opportunity to ensure that all the interventions identified in the needs assessment are assigned to the appropriate sectors and that there is no duplication. Moreover, assumptions about – for example – inflation or civil service salaries need to be harmonized among the various costing exercises.

26 There is still a large underreporting on malaria, TB and HIV/AIDS. Consequently, the population in need was based on WHO estimates used by health programmes in Yemen.

27 Calculated based on: (a) Government health expenditures of US$ 174 million in 2003; (b) the information that "Government expenditure accounted for 30% of total expenditure based on Yemen national health accounts 2000" in Fairbank A. *Public expenditure review: health sector, Republic of Yemen 1999–2003* (unpublished data, 2005); and (c) national health accounts, 2002.

Chapter 3 Guiding health investment choices: the policy implications

From the assessment of country experiences thus far in the CMH follow-up, it is clear that there has not been one methodology that has suited every country. Progress and challenges have been dependent on the ongoing political agenda and social situation in each country and the technical resources available for planning and analysis. But what have emerged are consistent features for successful advocacy and planning to develop a health investment strategy.

In this chapter, **selected** issues that were identified and addressed by the countries in the course of the macroeconomics and health work and reflected in the national reports are presented, linked to each of the three NCMH areas for action. The "policy implications" have been derived from the countries' experiences in addressing these issues. It is according to these policy implications that national policy-makers and planners, as well as development partners, can focus their efforts to strengthen country capacity in making decisions that will result in more effective and efficient health resource planning and management.

Enhance political support for increased health investments and positioning of health in development processes

Present evidence on health–development links

Systematic description of the impact of health investments is an important tool to convince policy-makers that allocations to the health sector are very low and do not reflect the contribution of the health sector to the overall development of the country.

Strengthen development processes

Medium-term and annual budgets should align with identified priorities and maximize the resources available. As a practical example, the health components of PRSPs are generally weak and tend to be 'wish-lists' of policy measures that are poorly prioritized, are not sequenced to ensure sustainability, and are 'de-linked' from national budgets *(15)*.

Selected country findings	Policy implications
Caribbean Community – present evidence on health–development links The Caribbean Commission on Health and Development was instituted to assist the CARICOM member countries in structuring their health and development agendas. This assistance has been accomplished through an assessment of determinants of health, coupled with selected studies on burden and cost of disease. These studies present an evaluation of the aggregate returns for areas such as foreign direct investment, tourism, and trade that can be	**Position health in development** The aim of the Ministry of Health in this exercise is to secure a more central position for health in development planning and increased financial allocations to health in the national budget. Integration of health targets into the poverty-reduction strategies and medium-term and annual budgets is based on a comprehensive planning exercise and development of a health investment plan. The following components have been central in the macroeconomics and health work in trying to achieve this aim.

expected from implementing a long-term strategy for health investment and of the economic and social consequences of the epidemiological and demographic transitions in the region. Locally-developed research is being used to convince senior government leaders of the necessity for increased health investments that target the most vulnerable groups.

Ghana – strengthen development processes
The implementation of the Ghana Macroeconomics and Health Initiative recommendations depends largely on intersectoral collaboration involving key players in the health sector and the national economy at large. The main thrust for the GMHI is to harmonize selected national health-related priorities in the Ghana Poverty Reduction Strategy, and to establish a multi-year strategy to expand coverage of essential health services.

The intersectoral composition of the GMHI has ensured that it is consistent with, and systematically aligns itself with, other ongoing planning activities. The report of the GMHI is also designed to input into the Ministry of Health Programme of Work for 2007–2011, and uses associated supporting mechanisms and planning tools (e.g. SWAps, MTEF, and previous programmes of work).

Yemen – promote dialogue and aligned goals between ministries of finance, planning and health
To start the MDG needs assessment exercise, the Ministry of Public Health and Population mobilized all directors and relevant technical staff to participate in three working groups. The working groups agreed on the objective of the MDG exercise, linkages with the national processes and mechanisms, broad strategies, main interventions, and health systems constraints that need investment. This can be seen as a response of the Ministry of Public Health and Population to the need for strong political leadership to coordinate the Ministry, governorates, multilateral and bilateral partners and also the private sector around a common set of indicators and targets.

- **Advocacy.** Facilitate opportunities for the Minister of Health to negotiate with the Ministry of Finance for more resources for the health sector and to back these demands with a plan for the use of funds.

- **Joint planning.** Create a platform for coordination and consensus building across mutually reliant sectors (with input from peripheral levels) and partners such as United Nations agencies, donors, and civil society. This objective is compatible with the Millennium Project's concept of an "MDG Strategy Group".

- **Assembling the evidence.** The Ministry of Health has an important role in transferring knowledge from the health sector, indicating the costs to the economy of the main health problems affecting the country and the economic benefits which would result from increased investments for health.

- **Investment plans.** Develop comprehensive health-sector strategies that have the potential to link priority health expenditures with medium-term demands on budget resources (for example, by utilizing medium-term expenditure frameworks).

Create comprehensive strategies and systems that better address the health of the poor

Set priorities for allocation of resources

In many countries, there is a lack of information on the main health problems, determinants of health, and people most affected, impeding appropriate allocation of health resources. Few countries have specific targets, and indicators of performance often reflect more the availability of local data than the result of a priority-setting exercise and a realistic assessment of what can be accomplished in a given time period.

Choose and cost interventions

The challenge is to identify the 'basket' of health and health-related interventions that will be delivered. Definition of interventions can take into account cost-effectiveness of interventions and their impact on reducing inequalities in health or previously agreed-upon national priorities. These investments will include both the costs of interventions and complementary investments in the health system that will enable those interventions to be delivered, particularly to poor or remote areas.

Ensure the optimal quantity and quality of the heath workforce

The challenge of establishing and maintaining an adequate health workforce in terms of quantity and quality has become much greater in recent years, due to the increasing problems of 'brain drain' and the HIV/AIDS pandemic. Those health workers who remain in developing countries often face low remuneration, lack of training opportunities, and insufficient supplies to perform their work.

Target poor and rural populations

Many obstacles prevent poor and vulnerable people from accessing health services. These obstacles could involve limited demand for health services – because of lack of information about health problems and treatment, high costs of care, poor transportation to the point of service, lack of confidence in those providing the service, or fear of stigmatization. Many middle-income countries are focusing efforts to target significant pockets of poverty.

Finance health for the poor

One of the main obstacles to access of health care is cost. Out-of-pocket expenses are impoverishing individuals and families without sufficient coverage enabled by increased public spending or effective financing schemes.

Work with civil society organizations and the private sector

One of the key variables impacting the access of poor people to public health services is the presence of organized communities – which are able to ensure information, advocacy, and delivery of services – and a regulated and high-quality private sector.

Selection of country findings	Policy implications
India – set priorities The India NCMH undertook a comprehensive causal analysis by which a set of priority health conditions were identified that account for the vast majority of mortality in India. The three criteria in choosing priority health conditions were :	**Analysis and planning – the investment plan** Facilitate the national capacity to execute all components of comprehensive health sector planning, including: ■ needs assessment; ■ consensus-building mechanism for target-setting;

- health condition disproportionately affects the poor;
- probability of health condition to impose serious burden in future years in the absence of interventions; and
- possibility of health condition driving large numbers of people into financial hardship.

This priority set of health conditions was matched with key interventions that were deemed both to be technically effective in reducing disease burden and to have been shown to be cost-effective.

Yemen – undertake a needs-based costing exercise
Between August 2004 and June 2005, Yemen formulated MDG-based health strategies and finalized the costing process of these strategies as an input into long-term national policy (2006–2015) and the medium-term health sector plan (2006–2010), which is currently being finalized. It proved crucial that the internationally advocated (United Nations Millennium Project) planning exercises were linked to national health sector planning to avoid duplication of efforts by the ministries and to respond to the need for technical and financial support in national planning.

China – target the poor and rural populations
The focus of the macroeconomics and health work in China has been on collecting and presenting the evidence to promote the need for a greater government role in ensuring affordable and quality health care for the population. China did not create a national commission on macroeconomics and health, but over the last few years has focused on understanding the impact of health on economic growth and on quantifying and documenting the challenges to fighting inequalities and poverty. Research has focused on documenting the financial barriers to health care and the inequities of resource allocation. Progress in the health system has been uneven, with wide disparities in almost all aspects tied closely to income inequality between urban and rural

- identification of a package of basic interventions, based upon country profile;
- assessment of available resources and delivery capabilities;
- costing of delivery of interventions, based on target scenarios;
- identification of financing options for resource gaps (public, external, risk-sharing)
- development of a strategy for sequenced implementation of investment plan
- monitoring and evaluation of performance by tracking flows of funds to the provincial and district levels, to capital or recurrent expenditures, and to target populations

Identify target populations
Improve capacity to collect income-based disaggregated data on rural and urban poverty pockets and patterns of access and payment.

Maximize capacity to use existing tools
Many tools are being developed or are already available through WHO and other organizations. Optimal integration into country analytic and planning processes could be strengthened through better integrated technical partnerships between development organizations and national technical staff. The NCMH in several countries has functioned to coordinate the use of existing tools in the development of an investment strategy or to commission studies where gaps were identified. Tools that were frequently identified by countries include: health sector reviews; needs assessment protocols; public health expenditure reviews; costing tools that are needs based, appropriate for package of interventions, and account for health system components (see Box 9 for a description of a WHO costing tool addressing these needs, building on WHO disease-costing tools that exist or are being developed in the areas of TB, HIV/AIDS, malaria, maternal health, child health, and immunizations); national health accounts; the health metrics network

areas, among regions and between income groups.

Caribbean Community – ensure the optimal quantity and quality of the health workforce
Another issue which was highlighted by the CCHD's report, that will have regional impact, is the problem of human resource management, especially the issue of migration of nurses. The report quotes a 35% vacancy rate for nurses alone with an estimated loss of government revenue of $16.7 million to train nurses at the basic level. The ministers of health of the region have already endorsed a programme of 'managed migration'. The Commission recommends the determination of the extent to which trade in nursing services and the permanent migration of nurses are symptomatic of deeper systemic considerations in the health sector and the wider socioeconomic situation.

Mexico – financial protection for poor populations
The NCMH made the case for a universal health insurance scheme as the most appropriate option to ensure equity and efficiency in the health system.
More than half of the population has no medical insurance. Although the health system has public insurance programmes and plans for those without access to social security, coverage is limited and – for the most part – only basic health services are offered. The NCMH cites Mexico's successful *Oportunidades* programme to use direct cash transfers to facilitate delivery of health and education services to the poor.

India – promote public–private collaboration and community participation
The NCMH concluded that efforts for public–private collaboration have been "…programmatic, sporadic, disjointed and tentative…" and not integrated under a comprehensive strategy to reach national health goals. On the other hand, nongovernmental organizations have been

Define the operational endpoints for monitoring and evaluation
Develop a set of indicators that monitor progress in resource-management against nationally-established targets. To use solely health outcomes is neither timely nor sensitive. Rather, there is a need to develop measurable indicators that can be reviewed on a periodic basis to input to planning and budgeting. Characteristics of such indicators should include that they:

- reveal not only how much funding goes to the various levels of care, but also show its geographic allocation;
- are sensitive to policy changes, considering not only expenditure data (important time lag), but also more recent data on amounts budgeted for health;
- draw from different kinds of data sources, such as surveys to assess whether an increase of funding actually resulted in better access to health services for a specific group of the population; and
- increase the accountability of governments and donors for allocating health funds according to their targets.

Intersectoral engagement
Create a platform for coordination at the technical level, and for joint planning and consensus-building across mutually-reliant sectors. Coordination is multifaceted, to include all components of planning, and requires a mechanism in which planners across sectors can share knowledge and data and reach a consensus on needed investments – especially through the strengthening of the planning department of the ministry of health.

Human resources
Identify effective measures for retaining health workers, and make specific proposals to the ministry of finance and to the cabinet. The responsibility of the ministry of health is to develop the best possible staffing for the health-care delivery system, given the resources available to the ministry and the country's priority health problems.

able to provide quality care at low-cost or free to poor patients. However, these efforts have been scattered and isolated. The Commission notes that nongovernmental organizations and community-based organizations can have a positive impact on access, equity, and quality of health-care services in rural and other hard-to-reach areas, and their potential has not been fully optimized.

In particular, the NCMH report calls for the participation of civil society groups to "de-medicalize, democratize and decentralize health-care delivery by having a wider group of people to share the powers, esponsibilities and functions". To reach this ambitious objective, the NCMH proposal calls for the primary health system to be "embedded within the community" using new institutional structures.

Cambodia – organization and engagement of civil society organizations

In Cambodia, there is an important and formalized participation of civil society organizations and nongovernmental organizations in the national development process, which includes a national forum of local and international nongovernmental organizations to advocate for the concerns of nongovernmental actors on issues such as the national poverty reduction strategy. MediCam, a non-profit umbrella organization comprising more than 100 members, has in particular worked as the main CSO interface with the Cambodian Government in the macroeconomics and health process. These activities have included the preparation of a position paper on the CSO involvement in the macroeconomics and health process and various advocacy activities to ensure understanding and consensus among the health sector CSOs in Cambodia. MediCam, as well as Care Cambodia, has also helped to include a CSO component in the national research agenda.

Transfer and management of funds to the periphery

Improve transfer of funds for health from the central to the service-delivery level to reach poor, rural populations –leakages of funds at different levels are common, as are delays in the release of funds to the periphery. In addition, improve district-level capacity to manage funds and implement health plans in line with national priorities. It is critical that lower-level management capacity be bolstered.

Financial protection

Build on continuing work of WHO and others on developing financing strategies to limit out-of-pocket health spending on essential health services, particularly by the poor. In most cases, this will require increased public spending on health.

Better engagement of civil society and the private sector

Representation in the NCMHs in several countries has illustrated the importance of expanded collaborative efforts with the civil and private sectors in planning, generating political support, participatory research, and improving access to the most vulnerable groups. This requires the creation of platforms for engagement and data-sharing and strengthened capacity to regulate quality of care. Civil society organizations have established strong ties to the community, and in developing countries a significant proportion of the poor are accessing the private sector for health care.

Increase the effectiveness of development assistance for health

Increase funding to reach targets in low-income countries

Although recent commitments to increased aid are encouraging, they fall far short of several global estimates on how much it will take to reach the MDGs. Moreover, there is concern that large commitments to vertical programmes may be absorbing staff and resources from the health system at large.

Align development assistance to national plans and budgets

Donors can do more to support the preparation and execution of the long-term macroeconomic plan and to integrate their projects and programmes into national strategies and budgets, including medium-term expenditure frameworks. The issues revolve around the following challenges:

- distortion of country priorities
- continuity and predictability
- parallel arrangements and delivery structures
- financing recurrent costs.

Harmonize donor procedures

Multiple and uncoordinated activities impede the ability of governments to manage development assistance – creating high transaction, negotiation, and administration costs. Recent findings from country studies show that "… countries continue to face the problem of coordinating large numbers of donors providing their assistance via multiple routes" (M. Foster, unpublished data, 2004).[28]

Selection of country findings	Policy implications
Yemen – maintain government leadership of international development assistance Aware of the limited institutional capacity and the need for international assistance to reach the health and health-related MDGs, the Ministry of Public Health and Population – together with its stakeholders – contributed to a comprehensive strategic plan for overall development. As a crucial step to align policy with the MDGs, the Government embarked on the MDG needs assessment process as promoted by the United Nations Millennium Project in August 2004. The resulting sectoral investment plans were then consolidated into a national plan with guidance from the Ministry of Planning and International Cooperation and technical assistance from the United Nations country team and specialized agencies *(34)*. Yemen's initiative to build on the CMH process supported the MDGs needs assessment and costing of health strategies and provided the opportunity to coordinate these efforts. **Rwanda – establish mechanisms for donor coordination** Several development partner meetings	**Track funding flows and targets** Create better and more timely data on the flow of external aid to the health sector. This should include funds that do not flow through the treasury ('off-budget'). The data currently available is insufficient to monitor alignment to national priorities and impact on health system performance. **Alignment to national sectoral priorities** Create or strengthen existing mechanisms (i.e. SWAps) that facilitate the channelling of donor funds according to country priorities and strategies while balancing the donors' need for monitoring performance and accountability. The SWAp mechanism has not overcome all problems related to the donor–recipient relationship. While focused on the health sector, SWAp planning is not automatically linked to the budgeting process of the finance ministry, nor does it generate much of a local evidence base useful in making resource allocation decisions across various health

28 Foster M, *op. cit.*

highlighted the need for establishing mechanisms to coordinate interventions undertaken by the Government and its partners in order to increase efficiency, avoid duplications and strengthen the intersectoral approach to development. For this reason, some coordination entities have been created:

- The Development Partners Coordination Group (DPCG) was created in November 2002 as a forum for the coordination of international assistance, charged with the responsibilities of harmonizing development programmes in order to avoid duplications and of monitoring the implementation of the PRSP. It is supported by two-technical advisory groups: the Harmonization and Alignment in Rwanda of Projects and Programmes group and the Budget Support Harmonization Group. The DPCG is also called to oversee the cluster groups.
- Eight cluster groups (including a health cluster) have been created to discuss coordination issues related to a specific sector. Each of them provides guidance for a better coordination of donors' assistance, emphasizing the SWAp strategy. The health cluster has been very active since the end of 2004. It meets regularly under the leadership of the Secretary-General of the Ministry of Health, while Coopération Technique Belge assumes the Secretariat. The overall role of the health cluster is to coordinate partners' interventions.

Ghana – use the investment plan to advocate for more funding

The GMHI findings are being used by the United Nations system to inform the assessment of the health component of the Millennium Project in Ghana. The report is also used as a reference in preparing the proposal for the United States Millennium Challenge Account which is making US$ 1 billion available to 16 pilot countries as of late 2005. The report will be used as part of donor meetings to discuss support for the Health Investment Plan and 'fast-tracking' Ghana towards the health MDGs, especially financing options. The report will be used to discuss the health share of the recent US$ 4 billion debt relief to the country.

investment options. Further, SWAps do not address the long-term sustainability and predictability of financing schemes.

Budgetary support

There is scope for action by donors in providing sustainable budget support and funding for recurrent costs, including human resources, in order to build national institutional capacity to supply public goods for health.

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Annex 1

Macroeconomic and health profiles for selected countries

CAMBODIA

Population estimates	Year 1993	Year 2004
Population total, 1993[a], 2004[b]	10 536 000	13 091 000
Annual population growth rate (%) 1998–2004[b]	–	1.81
Dependency ratio (per 100)[b]	101	74
Total fertility rate[b]	5.4	3.3
Macroeconomic indicators[a]	**Year 1993**	**Year 2003**
GDP (current US$)	2 478 743 000	4 227 854 000
GDP growth (annual %)	–	5.2
GDP per capita, PPP (constant 2000 international $)	1282	1963
Central government debt, total (% of GDP)	–	–
Current account balance (% of GDP)	-4.2	-3.0
Foreign direct investment, net inflows (% of GDP)	2.2	2.1
Exports of goods and services (% of GDP)	16.4	62.0
Imports of goods and services (% of GDP)	32.8	71.3
Inflation, consumer prices (annual %)	–	1.2
Official exchange rate (LCU per US$, period average)	2689.0	3973.3
Social indicators	**Value**	**Year**
Human development index (HDI) value[c]	0.571	2003
Population living below the national poverty line (%), (most recent 1990–2002)[c]	36.1	1990–2002
Rural population (% total population)[a]	81.4	2003
Adult literacy rate[b]	73.6	2004
GINI coefficient[a]	40.4	1997
Health status	**Year 2000**	**Year 2002 or 2003**
Adult mortality (per 1000) female, 2000[d], 2003[d]	264	285
Adult mortality (per 1000) male, 2000[d], 2003[d]	373	441
Healthy life expectancy at birth (years) females, 2000[d], 2002[d]	49	50
Healthy life expectancy at birth (years) males, 2000[d], 2002[d]	46	46
Life expectancy at birth (years) females, 2000[d], 2004[b]	59	65
Life expectancy at birth (years) males, 2000[d], 2004[b]	53	60
Health Millennium Development Goals	**Year 2000**	**Most recent year**
Infant mortality rate – both sexes (per 1000 live births), 2000[e], 2004[b]	95	66
Under-five mortality rate – both sexes (per 1000 live births), 2000[e], 2004[b]	134.1	82
Population with access to safe drinking water (%), 2004[b]	–	44
Population with toilet facility within premises (%), 2004[b]	–	22
Infant measle immunization (%), 2004[f]	–	80
Birth attended by skilled health personnel (%), 2004: MoH HIS (Joint Annual Performance Review, 2005)	–	32
Maternal mortality ratio (per 100 000 live births), 2000: Cambodia Demographic and Health Survey, 2000	437	–
Children under five years of age underweight for age (%), 2000[g]	45.2	–
HIV prevalence (%), 2005, National AIDS Authority of Cambodia, 2005	–	1.9
Malaria mortality rate (per 100 000), 2000, 2004 (Cambodia National Malaria Centre)	5	2.8
Tuberculosis prevalence all forms (per 100 000), 2000[g], 2004[f]	743	762
Tuberculosis mortality rate all forms (per 100 000), 2000[g], 2004[f]	91	95
Health system profile[d]	**Value**	**Year**
Number of physicians per 10 000	1.6	2000

Number of nurses per 10 000	8.5	2000
Number of health workers per 10 000	10.0	2000
Hospital beds per 10 000	5	2001
Public budget	**Year 1990 or 2000**	**Year 2002 or 2003**
General government expenditure on health as % GDP, 2000, 2002[h]	1.7	2.1
General government expenditure on health as % of general government expenditure, 2000, 2002[h]	15.7	18.6
Public expenditure on education (% of GDP), 2003[k]	–	1.8
Public expenditure on education (as % of total government expenditure), 2003[k]	–	13
Military expenditure (% of GDP), 1990[c], 2003[k]	3.1	1.61
Military expenditure (% of central government expenditure), 2003[k]	–	14
Tax revenue (% of GDP), 2003[k]	–	7.3
Total debt service (% of GDP), 1990[c], 2003[k]	2.7	1.69
ODA received (net disbursements) (as % of GDP), 2000, 2002[a]	11.1	12.2
Aid per capita (current US$), 2000, 2002[a]	31.4	37
Selected indicators of expenditure on health[h]	**Year 1998**	**Year 2002**
Total expenditure on health as % of GDP	10.5	12
General government expenditure on health as % of total expenditure on health	10.1	17.1
Private sector expenditure on health as % of total expenditure on health	89.9	82.9
Social security funds as % of general government expenditure on health	0	0
Prepaid and risk-pooling plans as % of private sector expenditure on health	0	0
Private households' out-of-pocket payment as % of private sector expenditure on health	89.6	85.2
External resources on health as % of total expenditure on health	12.4	4.9
Total expenditure on health per capita at international dollar rate	134	192
General government expenditure on health per capita at international dollar rate	14	33

Sources:
[a] World Development Indicators, selected years (http://devdata.worldbank.org/dataonline/ accessed 21 July 2005).
[b] Ministry of Planning, Cambodia (1).
[c] UNDP (2).
[d] WHO Statistical Information System, selected years (http://www3.who.int/whosis/menu.cfm accessed 18 July 2005).
[e] UNICEF Statistics, 2003 (http://www.childinfo.org/areas/childmortality/infantdata.php accessed 13 July 2005).
[f] WHO Country Health Information Profile, 2005 (http://www.wpro.who.int/NR/rdonlyres/DE665401-0DFD-4478-A3D6-1C4866430EEE/0/cam.pdf accessed 7 November 2005).
[g] WHO (3).
[h] National health accounts, selected years (http://www.who.int/nha/country/en/ accessed 21 July 2005).
[k] IMF (4).

CHINA

Population estimates	**Year 1993**	**Year 2003**
Population total[a]	1 178 440 000	1 288 400 000
Annual population growth rate (%) 1993–2003[b]	–	0.9
Dependency ratio (per 100)[b, c]	49	43
Total fertility rate[b, c]	1.9	1.8
Macroeconomic indicators[a]	**Year 1993**	**Year 2003**
GDP (current US$)	431 780 400 000	1 417 000 000 000
GDP growth (annual %)	13.5	9.3
GDP per capita, PPP (constant 2000 international $)	2188	4726
Central government debt, total (% of GDP)	5.3	12.7[m]
Current account balance (% of GDP)	-2.7	3.2
Foreign direct investment, net inflows (% of GDP)	6.4	3.8
Exports of goods and services (% of GDP)	17.1	34.3
Imports of goods and services (% of GDP)	18.6	31.8
Inflation, consumer prices (annual %)	14.6	1.2
Official exchange rate (LCU per US$, period average)	5.8	8.3
Social indicators	**Value**	**Year**
Human development index (HDI) value[d]	0.755	2003
Population living below the national poverty line (%), (most recent 1990–2002)[d]	4.6	1990–2002
Rural population (% total population)[a]	61.3	2003
Adult literacy rate[c]	90.9	2005
GINI coefficient[a]	44.7	2001
Health status[c]	**Year 2000**	**Year 2002 or 2003**
Adult mortality (per 1000) female, 2000, 2003	110	103
Adult mortality (per 1000) male, 2000, 2003	161	164
Healthy life expectancy at birth (years) females, 2000, 2002	63	65
Healthy life expectancy at birth (years) males, 2000, 2002	61	63
Life expectancy at birth (years) females, 2000, 2003	73	73
Life expectancy at birth (years) males, 2000, 2003	69	70
Health Millennium Development Goals	**Year 2000**	**Year 2002 or 2003**
Infant mortality rate – both sexes (per 1000 live births), 2000, 2003[e]	32	30
Under-five mortality rate – both sexes (per 1000 live births), 2000, 2003[c]	37.2	37
Population with sustainable access to an improved water source (%), 2002[a]	–	77
Population with access to improved sanitation (%), 2002[a]	–	44
Children under two years immunized with one dose of measles (%), 2003[b]	–	84
Birth attended by skilled health personnel (%)[f]	89.3	–
Maternal mortality ratio (per 100 000 live births), 2000[f], 2003[g]	56	43.2
Children under five years of age underweight for age (%)[f]	10.0	–
HIV prevalence among 15–49-year-olds (%)[f]	<0.1	–
Malaria mortality rate (per 100 000)[f]	0	–
Tuberculosis prevalence (per 100 000)[f]	250	–
Tuberculosis mortality rate (per 100 000)[f]	21	–
Health system profile[c]	**Value**	**Year**
Number of physicians per 10 000	16.4	2002
Number of nurses per 10 000	9.6	2003
Number of health workers per 10 000	26.0	2002/03
Hospital beds per 10 000	25	2002

Public budget	Year 1990 or 2000	Year 2002 or 2003
General government expenditure on health as % GDP, 2000, 2002[h]	1.9	2.0
General government expenditure on health as % of general government expenditure, 2000, 2002[h]	10.3	10
Public expenditure on education (% of GDP), 1990, 2000–2002[d]	2.3	–
Public expenditure on education (as % of total government expenditure), 1990[d], 2002[k]	12.8	10.2
Military expenditure (% of GDP), 1990, 2003[d]	2.7	2.3
Military expenditure (% of total government expenditure), 2000, 2002[k]	6.1	6.6
Tax revenue (% of GDP), 2000, 2002[a]	7.6	8.3[n]
Total debt service (% of GDP), 1990, 2003[d]	2	2.6
ODA received (net disbursements) (as % of GDP), 2000, 2002[a]	0.2	0.1
Aid per capita (current US$), 2000, 2002[a]	1.4	1.2
Selected indicators of expenditure on health[h]	**Year 1998**	**Year 2002**
Total expenditure on health as % of GDP	4.8	5.8
General government expenditure on health as % of total expenditure on health	39	33.7
Private sector expenditure on health as % of total expenditure on health	61	66.3
Social security funds as % of general government expenditure on health	53	50.8
Prepaid and risk-pooling plans as % of private sector expenditure on health	0.6	0.4
Private households' out-of-pocket payment as % of private sector expenditure on health	94	96.3
External resources on health as % of total expenditure on health	0.2	0.1
Total expenditure on health per capita at international dollar rate	154	261
General government expenditure on health per capita at international dollar rate	60	88

Sources:

[a] World Development Indicators, selected years (http://devdata.worldbank.org/dataonline/ accessed 21 July 2005).
[b] WHO (5).
[c] WHO Statistical Information System, selected years (http://www3.who.int/whosis/menu.cfm accessed 18 July 2005).
[d] UNDP (2).
[e] UNICEF Statistics, 2003 (http://www.childinfo.org/areas/childmortality/infantdata.php accessed 13 July 2005).
[f] WHO (3).
[g] Ministry of Health/Union Medical College, China (6,7).
[h] National health accounts, selected years (http://www.who.int/nha/country/en/ accessed 21 July 2005)
[k] National Bureau of Statistics, China (8,9).
[m] Last year, 1999.
[n] Last available year, 2001.

GHANA

Population estimates	Year 1993	Year 2003
Population total[a]	16 505 500	20 669 260
Annual population growth rate (%) 1993–2003[b]	–	2.3
Dependency ratio (per 100)[b c]	91	76
Total fertility rate[b c]	5.2	4.1
Macroeconomic indicators[a]	**Year 1993**	**Year 2003**
GDP (current US$)	5 965 704 000	7 624 200 000
GDP growth (annual %)	4.9	5.2
GDP per capita, PPP (constant 2000 international $)	1734	2114
Central government debt, total (% of GDP)	–	–
Current account balance (% of GDP)	-9.4	3.3
Foreign direct investment, net inflows (% of GDP)	2.1	1.8
Exports of goods and services (% of GDP)	20.3	40.3
Imports of goods and services (% of GDP)	36.4	52.2
Inflation, consumer prices (annual %)	25.0	26.7
Official exchange rate (LCU per US$, period average)	649.1	8677.4
Social indicators	**Value**	**Year**
Human development index (HDI) value[d]	0.489	2003
Population living below the national poverty line (%), (most recent 1990-2002)[d]	39.5	1990–2002
Rural population (% total population)[a]	62.9	2003
Adult literacy rate[c]	54.1	2005
GINI coefficient[a]	40.8	1999
Health status[c]	**Year 2000**	**Year 2002 or 2003**
Adult mortality (per 1000) female, 2000, 2003	326	295
Adult mortality (per 1000) male, 2000, 2003	379	352
Healthy life expectancy at birth (years) females, 2000, 2002	47	50
Healthy life expectancy at birth (years) males, 2000, 2002	47	49
Life expectancy at birth (years) females, 2000, 2003	58	60
Life expectancy at birth (years) males, 2000, 2003	55	57
Health Millennium Development Goals	**Year 2000**	**Year 2003**
Infant mortality rate – both sexes (per 1000 live births)[e]	62	59
Under-five mortality rate – both sexes (per 1000 live births)[c]	104.6	95
Population with sustainable access to an improved water source (%), 2002[a]	–	79
Population with access to improved sanitation (%), 2002[a]	–	58
Children under two years immunized with one dose of measles (%)[b]	–	80
Birth attended by skilled health personnel (%)[f]	44.3	–
Maternal mortality ratio (per 100 000 live births)[f]	540	–
Children under five years of age underweight for age (%)[f]	24.9[h]	–
HIV prevalence among 15–49-year-olds (%)[f]	3.2	–
Malaria mortality rate (per 100 000)[f]	66	–
Tuberculosis prevalence (per 100 000)[f]	381	–
Tuberculosis mortality rate (per 100 000)[f]	42	–
Health system profile[c]	**Value**	**Year**
Number of physicians per 10 000	0.9	2002
Number of nurses per 10 000	8.4	2002
Number of health workers per 10 000	9.3	2002
Hospital beds per 10 000	–	–

Public budget	Year 1990 or 2000	Year 2002 or 2003
General government expenditure on health as % GDP, 2000, 2002[g]	2.3	2.3
General government expenditure on health as % of general government expenditure, 2000, 2002[g]	7.8	8.4
Public expenditure on education (% of GDP), 1990, 2000–2002[d]	3.2	–
Public expenditure on education (as % of total government expenditure), 1990, 2000–2002[d]	24.3	–
Military expenditure (% of GDP), 1990, 2003[d]	0.4	0.7
Military expenditure (% of central government expenditure), 2000, 2002[a]	–	–
Tax revenue (% of GDP), 2000, 2002[a]	–	–
Total debt service (% of GDP), 1990, 2003[d]	6.2	6.3
ODA received (net disbursements) (as % of GDP), 2000, 2002[a]	12.1	10.5
Aid per capita (current US$), 2000, 2002[a]	30.6	32.0
Selected indicators of expenditure on health[g]	**Year 1998**	**Year 2002**
Total expenditure on health as % of GDP	5.5	5.6
General government expenditure on health as % of total expenditure on health	42	41
Private sector expenditure on health as % of total expenditure on health	58	59
Social security funds as % of general government expenditure on health	NA	NA
Prepaid and risk-pooling plans as % of private sector expenditure on health	0	0
Private households' out-of-pocket payment as % of private sector expenditure on health	100	100
External resources on health as % of total expenditure on health	6.2	18.5
Total expenditure on health per capita at international dollar rate	61	73
General government expenditure on health per capita at international dollar rate	26	30

Sources:
[a] World Development Indicators, selected years (http://devdata.worldbank.org/dataonline/ accessed 21 July 2005).
[b] WHO (5).
[c] WHO Statistical Information System, selected years (http://www3.who.int/whosis/menu.cfm accessed 18 July 2005).
[d] UNDP (2).
[e] UNICEF Statistics, 2003 (http://www.childinfo.org/areas/childmortality/infantdata.php accessed 13 July 2005)..
[f] WHO (3).
[g] National health accounts, selected years (http://www.who.int/nha/country/en/ accessed 21 July 2005)
[h] Years 1998–1999.

INDIA

Population estimates	Year 1993	Year 2003
Population total[a]	899 329 000	1 064 399 000
Annual population growth rate (%) 1993–2003[b]	–	1.7
Dependency ratio (per 100)[b c]	68	61
Total fertility rate[b c]	3.8	3.0
Macroeconomic indicators[a]	**Year 1993**	**Year 2003**
GDP (current US$)	273 937 900 000	600 637 400 000
GDP growth (annual %)	4.9	8.6
GDP per capita, PPP (constant 2000 international $)	1792	2732
Central government debt, total (% of GDP)	52.8	64.5
Current account balance (% of GDP)	-0.7	1.4
Foreign direct investment, net inflows (% of GDP)	0.2	0.7
Exports of goods and services (% of GDP)	10.0	14.5
Imports of goods and services (% of GDP)	10.0	16.0
Inflation, consumer prices (annual %)	6.4	3.8
Official exchange rate (LCU per US$, period average)	30.5	46.6
Social indicators	**Value**	**Year**
Human development index (HDI) value[d]	0.602	2003
Population living below the national poverty line (%), (most recent 1990–2002)[d]	28.6	1990–2002
Rural population (% total population)[a]	71.7	2003
Adult literacy rate[c]	61.3	2005
GINI coefficient[a]	32.5	2000
Health status[c]	**Year 2000**	**Year 2002 or 2003**
Adult mortality (per 1000) female, 2000, 2003	213	213
Adult mortality (per 1000) male, 2000, 2003	287	283
Healthy life expectancy at birth (years) females, 2000, 2002	52	54
Healthy life expectancy at birth (years) males, 2000, 2002	52	53
Life expectancy at birth (years) females, 2000, 2003	63	63
Life expectancy at birth (years) males, 2000, 2003	60	60
Health Millennium Development Goals	**Year 2000**	**Year 2003**
Infant mortality rate – both sexes (per 1000 live births)[e]	68	63
Under-five mortality rate – both sexes (per 1000 live births)[c]	95.7	87
Population with sustainable access to an improved water source (%), 2002[a]	–	86
Population with access to improved sanitation (%), 2002[a]	–	30
Children under two years immunized with one dose of measles (%)[b]	–	67
Birth attended by skilled health personnel (%)[f]	42.3	–
Maternal mortality ratio (per 100 000 live births)[f]	540	–
Children under five years of age underweight for age (%)[f]	46.7[h]	–
HIV prevalence among 15–49-year-olds (%)[f]	0.8	–
Malaria mortality rate (per 100 000)[f]	3	–
Tuberculosis prevalence (per 100 000)[f]	431	–
Tuberculosis mortality rate (per 100 000)[f]	41	–
Health system profile[c]	**Value**	**Year**
Number of physicians per 10 000	5.9	2003
Number of nurses per 10 000	7.9	2003
Number of health workers per 10 000	13.8	2003
Hospital beds per 10 000	9	2003

Public budget	Year 1990 or 2000	Year 2002 or 2003
General government expenditure on health as % GDP, 2000, 2002[g]	1.3	1.3
General government expenditure on health as % of general government expenditure, 2000, 2002[g]	4.6	4.4
Public expenditure on education (% of GDP), 1990, 2000–2002[d]	3.7	4.1
Public expenditure on education (as % of total government expenditure), 1990, 2000–2002[d]	12.2	12.7
Military expenditure (% of GDP), 1990, 2003[d]	2.7	2.1
Military expenditure (% of central government expenditure), 2000, 2002[a]	14.9	13.8
Tax revenue (% of GDP), 2000, 2002[a]	9.0	9.0
Total debt service (% of GDP), 1990, 2003[d]	2.6	3.4
ODA received (net disbursements) (as % of GDP), 2000, 2002[a]	0.3	0.3
Aid per capita (current US$), 2000, 2002[a]	1.5	1.4
Selected indicators of expenditure on health[g]	**Year 1998**	**Year 2002**
Total expenditure on health as % of GDP	5.2	6.1
General government expenditure on health as % of total expenditure on health	26.5	21.3
Private sector expenditure on health as % of total expenditure on health	73.5	78.7
Social security funds as % of general government expenditure on health	3.8	4.6
Prepaid and risk-pooling plans as % of private sector expenditure on health	0.4	0.7
Private households' out-of-pocket payment as % of private sector expenditure on health	98.4	98.5
External resources on health as % of total expenditure on health	2.8	1
Total expenditure on health per capita at international dollar rate	66	96
General government expenditure on health per capita at international dollar rate	17	20

Sources:
[a] World Development Indicators (WDI), selected years.
[b] WHO (5).
[c] WHO Statistical Information System, selected years (http://www3.who.int/whosis/menu.cfm accessed 18 July 2005).
[d] UNDP (2).
[e] UNICEF Statistics, 2003 (http://www.childinfo.org/areas/childmortality/infantdata.php accessed 13 July 2005).
[f] WHO (3).
[g] National health accounts, selected years (http://www.who.int/nha/country/en/ accessed 21 July 2005)
[h] Years 1998–1999.

INDONESIA

Population estimates	**Year 1993**	**Year 2003**
Population total[a]	187 231 800	214 674 200
Annual population growth rate (%) 1993–2003[b]	–	1.4
Dependency ratio (per 100)[b c]	63	53
Total fertility rate[b c]	3.0	2.3
Macroeconomic indicators[a]	**Year 1993**	**Year 2003**
GDP (current US$)	158 006 900 000	208 311 900 000
GDP growth (annual %)	7.3	4.1
GDP per capita, PPP (constant 2000 international $)	2683	3175
Central government debt, total (% of GDP)	37.5	45.2[k]
Current account balance (% of GDP)	-1.3	3.6
Foreign direct investment, net inflows (% of GDP)	1.3	-0.3
Exports of goods and services (% of GDP)	26.8	31.2
Imports of goods and services (% of GDP)	23.8	25.7
Inflation, consumer prices (annual %)	9.7	6.6
Official exchange rate (LCU per US$, period average)	2087.1	8577.1
Social indicators	**Value**	**Year**
Human development index (HDI) value[d]	0.697	2003
Population living below the national poverty line (%), (most recent 1990–2002)[d]	27.1	1990–2002
Rural population (% total population)[a]	55.9	2003
Adult literacy rate[c]	87.9	2005
GINI coefficient[a]	34.3	2002
Health status[c]	**Year 2000**	**Year 2002 or 2003**
Adult mortality (per 1000) female, 2000, 2003	191	204
Adult mortality (per 1000) male, 2000, 2003	250	241
Healthy life expectancy at birth (years) females, 2000, 2002	58	59
Healthy life expectancy at birth (years) males, 2000, 2002	57	57
Life expectancy at birth (years) females, 2000, 2003	67	68
Life expectancy at birth (years) males, 2000, 2003	63	65
Health Millennium Development Goals	**Year 2000**	**Year 2003**
Infant mortality rate – both sexes (per 1000 live births)[e]	35	31
Under-five mortality rate – both sexes (per 1000 live births)[c]	50.1	41
Population with sustainable access to an improved water source (%), 2002[a]	–	78
Population with access to improved sanitation (%), 2002[a]	–	52
Children under two years immunized with one dose of measles (%)[b]	–	72
Birth attended by skilled health personnel (%)[f]	55.8	–
Maternal mortality ratio (per 100 000 live births)[f]	230	–
Children under five years of age underweight for age (%)[f]	27.3[h]	–
HIV prevalence among 15–49-year-olds (%)[f]	<0.1	–
Malaria mortality rate (per 100 000)[f]	4	–
Tuberculosis prevalence (per 100 000)[f]	742	–
Tuberculosis mortality rate (per 100 000)[f]	67	–
Health system profile[c]	**Value**	**Year**
Number of physicians per 10 000	1.1	1998
Number of nurses per 10 000	4.9	2000
Number of health workers per 10 000	6.0	1998/00
Hospital beds per 10 000	60	1998

Public budget	Year 1990 or 2000	Year 2002 or 2003
General government expenditure on health as % GDP, 2000, 2002[g]	0.7	1.2
General government expenditure on health as % of general government expenditure, 2000, 2002[g]	3.5	5.4
Public expenditure on education (% of GDP), 1990, 2000-2002[d]	1	1.2
Public expenditure on education (as % of total government expenditure), 1990, 1999–2001[d]	–	9.8
Military expenditure (% of GDP), 1990, 2003[d]	1.8	1.5
Military expenditure (% of central government expenditure), 2000, 2002[a]	5.7[k]	–
Tax revenue (% of GDP), 2000, 2002[a]	16.3[k]	13.0[m]
Total debt service (% of GDP), 1990, 2003[d]	8.7	8.9
ODA received (net disbursements) (as % of GDP), 2000, 2002[a]	1.1	0.8
Aid per capita (current US$), 2000, 2002[a]	8.0	6.2
Selected indicators of expenditure on health[g]	**Year 1998**	**Year 2002**
Total expenditure on health as % of GDP	2.5	3.2
General government expenditure on health as % of total expenditure on health	27.8	36
Private sector expenditure on health as % of total expenditure on health	72.2	64
Social security funds as % of general government expenditure on health	8.7	9.3
Prepaid and risk-pooling plans as % of private sector expenditure on health	6.7	5.2
Private households' out-of-pocket payment as % of private sector expenditure on health	74.3	76.1
External resources on health as % of total expenditure on health	8.3	1.8
Total expenditure on health per capita at international dollar rate	73	110
General government expenditure on health per capita at international dollar rate	20	40

Sources:
[a] World Development Indicators, selected years (http://devdata.worldbank.org/dataonline/ accessed 21 July 2005).
[b] WHO (5).
[c] WHO Statistical Information System, selected years (http://www3.who.int/whosis/menu.cfm accessed 18 July 2005).
[d] UNDP (2).
[e] UNICEF Statistics, 2003 (http://www.childinfo.org/areas/childmortality/infantdata.php accessed 13 July 2005).
[f] WHO (3).
[g] National health accounts, selected years (http://www.who.int/nha/country/en/ accessed 21 July 2005).
[h] Year 2002.
[k] Last available year, 1999.
[m] Last available year, 2001.

MEXICO

Population estimates	Year 1993	Year 2003
Population total[a]	87 953 640	102 291 000
Annual population growth rate (%) 1993–2003[b]	–	1.6
Dependency ratio (per 100)[b, c]	70	60
Total fertility rate[b c]	3.1	2.5

Macroeconomic indicators[a]	Year 1993	Year 2003
GDP (current US$)	403 195 500 000	626 079 600 000
GDP growth (annual %)	2.0	1.3
GDP per capita, PPP (constant 2000 international $)	7811	8661
Central government debt, total (% of GDP)	25.3	23.3[k]
Current account balance (% of GDP)	-5.8	-1.4
Foreign direct investment, net inflows (% of GDP)	1.1	1.7
Exports of goods and services (% of GDP)	15.2	28.4
Imports of goods and services (% of GDP)	19.2	30.1
Inflation, consumer prices (annual %)	9.8	4.5
Official exchange rate (LCU per US$, period average)	3.1	10.8

Social indicators	Value	Year
Human development index (HDI) value[d]	0.814	2003
Population living below the national poverty line (%), (most recent 1990–2002)[d]	10.1	1990–2002
Rural population (% total population)[a]	25.0	2003
Adult literacy rate[c]	90.5	2005
GINI coefficient[a]	54.6	2000

Health status[c]	Year 2000	Year 2002 or 2003
Adult mortality (per 1000) female, 2000, 2003	101	95
Adult mortality (per 1000) male, 2000, 2003	180	166
Healthy life expectancy at birth (years) females, 2000, 2002	65	68
Healthy life expectancy at birth (years) males, 2000, 2002	63	63
Life expectancy at birth (years) females, 2000, 2003	76	77
Life expectancy at birth (years) males, 2000, 2003	71	72

Health Millennium Development Goals	Year 2000	Year 2003
Infant mortality rate – both sexes (per 1000 live births)[e]	25	23
Under-five mortality rate – both sexes (per 1000 live births)[c]	28.9	28
Population with sustainable access to an improved water source (%), 2002[a]	–	91
Population with access to improved sanitation (%), 2002[a]	–	77
Children under two years immunized with one dose of measles (%)[b]	–	96
Birth attended by skilled health personnel (%)[f]	85.7	–
Maternal mortality ratio (per 100 000 live births)[f]	83	–
Children under five years of age underweight for age (%)[f]	7.5[h]	–
HIV prevalence among 15–49-year-olds (%)[f]	0.2	–
Malaria mortality rate (per 100 000)[f]	0	–
Tuberculosis prevalence (per 100 000)[f]	49	–
Tuberculosis mortality rate (per 100 000)[f]	4	–

Health system profile[c]	Value	Year
Number of physicians per 10 000	17.1	2001
Number of nurses per 10 000	10.8	1999
Number of health workers per 10 000	27.9	1999/01
Hospital beds per 10 000	11	2002

Public budget	Year 1990 or 2000	Year 2002 or 2003
General government expenditure on health as % GDP, 2000, 2002[g]	2.6	2.7
General government expenditure on health as % of general government expenditure, 2000, 2002[g]	16.6	16.6
Public expenditure on education (% of GDP), 1990, 2000–2002[d]	3.6	5.3
Public expenditure on education (as % of total government expenditure), 1990, 2000-2002[d]	12.8	24.3
Military expenditure (% of GDP), 1990, 2003[d]	0.5	0.5
Military expenditure (% of central government expenditure), 2000, 2002[a]	3.3	–
Tax revenue (% of GDP), 2000, 2002[a]	11.7	–
Total debt service (% of GDP), 1990, 2003[d]	4.3	6.5
ODA received (net disbursements) (as % of GDP), 2000, 2002[a]	0.0	0.0
Aid per capita (current US$), 2000, 2002[a]	-0.6	1.3
Selected indicators of expenditure on health[g]	**1998**	**2002**
Total expenditure on health as % of GDP	5.4	6.1
General government expenditure on health as % of total expenditure on health	46	44.9
Private sector expenditure on health as % of total expenditure on health	54	55.1
Social security funds as % of general government expenditure on health	72.4	66
Prepaid and risk-pooling plans as % of private sector expenditure on health	4.1	5.4
Private households' out-of-pocket payment as % of private sector expenditure on health	95.9	94.6
External resources on health as % of total expenditure on health	0.9	0.8
Total expenditure on health per capita at international dollar rate	427	550
General government expenditure on health per capita at international dollar rate	196	247

Sources:
[a] World Development Indicators, selected years (http://devdata.worldbank.org/dataonline/ accessed 21 July 2005).
[b] WHO (5).
[c] WHO Statistical Information System, selected years (http://www3.who.int/whosis/menu.cfm accessed 18 July 2005).
[d] UNDP (2).
[e] UNICEF Statistics, 2003 (http://www.childinfo.org/areas/childmortality/infantdata.php accessed 13 July 2005).
[f] WHO (3).
[g] National health accounts, selected years (http://www.who.int/nha/country/en/ accessed 21 July 2005)
[h] Years 1998–1999.
[k] Last available year, 2000.

NEPAL

Population estimates	Year 1993	Year 2003
Population total[a]	19 480 940	24 659 960
Annual population growth rate (%) 1993–2003[b]	–	2.3
Dependency ratio (per 100)[b c]	81	78
Total fertility rate[b c]	4.9	4.2
Macroeconomic indicators[a]	**Year 1993**	**Year 2003**
GDP (current US$)	3 660 042 000	5 850 821 000
GDP growth (annual %)	3.5	3.1
GDP per capita, PPP (constant 2000 international $)	1103	1341
Central government debt, total (% of GDP)	63.7	66.8
Current account balance (% of GDP)	-6.1	2.9
Foreign direct investment, net inflows (% of GDP)	0.0	0.3
Exports of goods and services (% of GDP)	18.4	16.7
Imports of goods and services (% of GDP)	28.8	28.8
Inflation, consumer prices (annual %)	7.5	5.7
Official exchange rate (LCU per US$, period average)	48.6	76.1
Social indicators	**Value**	**Year**
Human development index (HDI) value[d]	0.526	2003
Population living below the national poverty line (%), (most recent 1990–2002)[d]	42	1990–2002
Rural population (% total population)[a]	87.1	2003
Adult literacy rate[c]	48.6	2005
GINI coefficient[a]	36.7	1996
Health status[c]	**Year 2000**	**Year 2002 or 2003**
Adult mortality (per 1000) female, 2000, 2003	314	284
Adult mortality (per 1000) male, 2000, 2003	314	290
Healthy life expectancy at birth (years) females, 2000, 2002	44	51
Healthy life expectancy at birth (years) males, 2000, 2002	48	53
Life expectancy at birth (years) females, 2000, 2003	58	61
Life expectancy at birth (years) males, 2000, 2003	59	60
Health Millennium Development Goals	**2000**	**2003**
Infant mortality rate – both sexes (per 1000 live births)[e]	69	61
Under-five mortality rate – both sexes (per 1000 live births)[c]	95.2	82
Population with sustainable access to an improved water source (%), 2002[a]	–	84
Population with access to improved sanitation (%), 2002[a]	–	27
Children under two years immunized with one dose of measles (%)[b]	–	75
Birth attended by skilled health personnel (%)[f]	11.9	–
Maternal mortality ratio (per 100 000 live births)[f]	740	–
Children under five years of age underweight for age (%)[f]	48.3[h]	–
HIV prevalence among 15–49-year-olds (%)[f]	0.3	–
Malaria mortality rate (per 100 000)[f]	20	–
Tuberculosis prevalence (per 100 000)[f]	299	–
Tuberculosis mortality rate (per 100 000)[f]	27	–
Health system profile[c]	**Value**	**Year**
Number of physicians per 10 000	1.6	2002
Number of nurses per 10 000	2.6	2001
Number of health workers per 10 000	4.2	2001/02
Hospital beds per 10 000	2	1999

Public budget	Year 1990 or 2000	Year 2002 or 2003
General government expenditure on health as % GDP, 2000, 2002[g]	1.0	1.4
General government expenditure on health as % of general government expenditure, 2000, 2002[g]	5.6	7.5
Public expenditure on education (% of GDP), 1990, 2000–2002[d]	2	3.4
Public expenditure on education (as % of total government expenditure), 1990, 2000–2002[d]	8.5	14.9
Military expenditure (% of GDP), 1990, 2003[d]	0.9	1.6
Military expenditure (% of central government expenditure), 2000, 2002[a]	–	–
Tax revenue (% of GDP), 2000, 2002[a]	8.7	9.3
Total debt service (% of GDP), 1990, 2003[d]	1.9	1.9
ODA received (net disbursements) (as % of GDP), 2000, 2002[a]	7.1	6.6
Aid per capita (current US$), 2000, 2002[a]	16.9	15.1
Selected indicators of expenditure on health[g]	**1998**	**2002**
Total expenditure on health as % of GDP	5.1	5.2
General government expenditure on health as % of total expenditure on health	25.6	27.2
Private sector expenditure on health as % of total expenditure on health	74.4	72.8
Social security funds as % of general government expenditure on health	0	0
Prepaid and risk-pooling plans as % of private sector expenditure on health	0	0
Private households' out-of-pocket payment as % of private sector expenditure on health	92.4	92.2
External resources on health as % of total expenditure on health	10.9	9
Total expenditure on health per capita at international dollar rate	55	64
General government expenditure on health per capita at international dollar rate	14	17

Sources:
[a] World Development Indicators, selected years (http://devdata.worldbank.org/dataonline/ accessed 21 July 2005).
[b] WHO (5).
[c] WHO Statistical Information System, selected years (http://www3.who.int/whosis/menu.cfm accessed 18 July 2005).
[d] UNDP (2).
[e] UNICEF Statistics, 2003 (http://www.childinfo.org/areas/childmortality/infantdata.php accessed 13 July 2005).
[f] WHO (3).
[g] National health accounts, selected years (http://www.who.int/nha/country/en/ accessed 21 July 2005).
[h] Year 2001.

RWANDA

Population estimates	Year 1993	Year 2003
Population total[a]	7 608 000	8 395 000
Annual population growth rate (%) 1993–2003[b]	–	4.2
Dependency ratio (per 100)[b c]	98	91
Total fertility rate[b c]	6.7	5.7
Macroeconomic indicators[a]	**Year 1993**	**Year 2003**
GDP (current US$)	1 971 348 000	1 637 261 000
GDP growth (annual %)	-8.1	3.2
GDP per capita, PPP (constant 2000 international $)	1047	1198
Central government debt, total (% of GDP)	–	–
Current account balance (% of GDP)	-6.5	-11.7
Foreign direct investment, net inflows (% of GDP)	0.3	0.3
Exports of goods and services (% of GDP)	5.2	8.6
Imports of goods and services (% of GDP)	20.5	27.7
Inflation, consumer prices (annual %)	12.4	6.9
Official exchange rate (LCU per US$, period average)	144.2	537.7
Social indicators	**Value**	**Year**
Human development index (HDI) value[d]	0.45	2003
Population living below the national poverty line (%), (most recent 1990–2002)[d]	51.2	1990–2002
Rural population (% total population)[a]	93.4	2003
Adult literacy rate[c]	64	2005
GINI coefficient[a]	28.9	2001
Health status[c]	**Year 2000**	**Year 2002 or 2003**
Adult mortality (per 1000) female, 2000, 2003	599	455
Adult mortality (per 1000) male, 2000, 2003	667	541
Healthy life expectancy at birth (years) females, 2000, 2002	32	40
Healthy life expectancy at birth (years) males, 2000, 2002	32	36
Life expectancy at birth (years) females, 2000, 2003	41	46
Life expectancy at birth (years) males, 2000, 2003	39	43
Health Millennium Development Goals	**Year 2000**	**Year 2003**
Infant mortality rate – both sexes (per 1000 live births)[e]	118	118
Under-five mortality rate – both sexes (per 1000 live births)[c]	182.3	203
Population with sustainable access to an improved water source (%), 2002[a]	–	73
Population with access to improved sanitation (%), 2002[a]	–	41
Children under two years immunized with one dose of measles (%)[b]	–	90
Birth attended by skilled health personnel (%)[f]	30.8	–
Maternal mortality ratio (per 100 000 live births)[f]	1400	–
Children under five years of age underweight for age (%)[f]	24.3[h]	–
HIV prevalence among 15–49-year-olds (%)[f]	7.0	–
Malaria mortality rate (per 100 000)[f]	186	–
Tuberculosis prevalence (per 100 000)[f]	500	–
Tuberculosis mortality rate (per 100 000)[f]	55	–
Health system profile[c]	**Value**	**Year**
Number of physicians per 10 000	0.2	2002
Number of nurses per 10 000	2.1	2002
Number of health workers per 10 000	2.3	2002
Hospital beds per 10 000	–	–

Public budget	Year 1990 or 2000	Year 2002 or 2003
General government expenditure on health as % GDP, 2000, 2002[g]	2.9	3.0
General government expenditure on health as % of general government expenditure, 2000, 2002[g]	14.8	13.4
Public expenditure on education (% of GDP), 1990, 2000–2002[d]	–	2.8
Public expenditure on education (as % of total government expenditure), 1990, 1999–2001[d]	–	–
Military expenditure (% of GDP), 1990, 2003[d]	3.7	2.8
Military expenditure (% of central government expenditure), 2000, 2002[a]	–	–
Tax revenue (% of GDP), 2000, 2002[a]	9.0[k]	–
Total debt service (% of GDP), 1990, 2003[d]	0.8	1.3
ODA received (net disbursements) (as % of GDP), 2000, 2002[a]	17.8	20.7
Aid per capita (current US$), 2000, 2002[a]	41.8	43.5
Selected indicators of expenditure on health[g]	**Year 1998**	**Year 2002**
Total expenditure on health as % of GDP	5	5.3
General government expenditure on health as % of total expenditure on health	51.3	57.2
Private sector expenditure on health as % of total expenditure on health	48.7	42.8
Social security funds as % of general government expenditure on health	0.6	0.6
Prepaid and risk-pooling plans as % of private sector expenditure on health	0.3	0.3
Private households' out-of-pocket payment as % of private sector expenditure on health	67	65.2
External resources on health as % of total expenditure on health	50.5	32.8
Total expenditure on health per capita at international dollar rate	39	48
General government expenditure on health per capita at international dollar rate	20	27

Sources:
[a] World Development Indicators, selected years (http://devdata.worldbank.org/dataonline/ accessed 21 July 2005).
[b] WHO (5).
[c] WHO Statistical Information System, selected years (http://www3.who.int/whosis/menu.cfm accessed 18 July 2005).
[d] UNDP (2).
[e] UNICEF Statistics, 2003 (http://www.childinfo.org/areas/childmortality/infantdata.php accessed 13 July 2005).
[f] WHO (3).
[g] National health accounts, selected years (http://www.who.int/nha/country/en/ accessed 21 July 2005)
[h] Year 2000.
[k] Last available year, 1993.

SENEGAL

Population estimates	Year 1993	Year 2003
Population total[a]	7 860 090	10 239 850
Annual population growth rate (%) 1993–2003[b]	–	2.4
Dependency ratio (per 100)[b,c]	94	84
Total fertility rate[b,c]	6.0	4.9
Macroeconomic indicators[a]	**Year 1993**	**Year 2003**
GDP (current US$)	5 430 816 000	6 496 372 000
GDP growth (annual %)	-2.2	6.5
GDP per capita, PPP (constant 2000 international $)	1302	1557
Central government debt, total (% of GDP)	–	72.8[k]
Current account balance (% of GDP)	-8.0	-6.7
Foreign direct investment, net inflows (% of GDP)	0.0	1.2
Exports of goods and services (% of GDP)	22.2	28.4
Imports of goods and services (% of GDP)	28.2	40.5
Inflation, consumer prices (annual %)	-0.6	0.0
Official exchange rate (LCU per US$, period average)	283.2	581.2
Social indicators	**Value**	**Year**
Human development index (HDI) value[d]	0.458	2003
Population living below the national poverty line (%), (most recent 1990–2002)[d]	33.4	1990–2002
Rural population (% total population)[a]	50.4	2003
Adult literacy rate[c]	41	2005
GINI coefficient[a]	41.3	1995
Health status[c]	**Year 2000**	**Year 2002 or 2003**
Adult mortality (per 1000) female, 2000, 2003	303	280
Adult mortality (per 1000) male, 2000, 2003	355	350
Healthy life expectancy at birth (years) females, 2000, 2002	45	49
Healthy life expectancy at birth (years) males, 2000, 2002	45	47
Life expectancy at birth (years) females, 2000, 2003	56	57
Life expectancy at birth (years) males, 2000, 2003	54	54
Health Millennium Development Goals	**Year 2000**	**Year 2003**
Infant mortality rate – both sexes (per 1000 live births)[e]	80	78
Under-five mortality rate – both sexes (per 1000 live births)[c]	137.8	137
Population with sustainable access to an improved water source (%), 2002[a]	–	72
Population with access to improved sanitation (%), 2002[a]	–	52
Children under two years immunized with one dose of measles (%)[b]	–	60
Birth attended by skilled health personnel (%)[f]	50.5	–
Maternal mortality ratio (per 100 000 live births)[f]	690	–
Children under five years of age underweight for age (%)[f]	22.7[h]	–
HIV prevalence among 15–49-year-olds (%)[f]	0.8	–
Malaria mortality rate (per 100 000)[f]	71	–
Tuberculosis prevalence (per 100 000)[f]	416	–
Tuberculosis mortality rate (per 100 000)[f]	46	–
Health system profile[c]	**Value**	**Year**
Number of physicians per 10 000	0.8	1995
Number of nurses per 10 000	2.9	1995
Number of health workers per 10 000	3.6	1995
Hospital beds per 10 000	–	–

Public budget	Year 1990 or 2000	Year 2002 or 2003
General government expenditure on health as % GDP, 2000, 2002[g]	2.0	2.3
General government expenditure on health as % of general government expenditure, 2000, 2002[g]	10.3	11.2
Public expenditure on education (% of GDP), 1990, 2000-2002[d]	3.9	3.6
Public expenditure on education (as % of total government expenditure), 1990, 2000–2002[d]	26.9	–
Military expenditure (% of GDP), 1990, 2003[d]	2	1.5
Military expenditure (% of central government expenditure), 2000, 2002[a]	10.4	9.7[k]
Tax revenue (% of GDP), 2000, 2002[a]	17.3	17.0[k]
Total debt service (% of GDP), 1990, 2003[d]	5.7	3.8
ODA received (net disbursements) (as % of GDP), 2000, 2002[a]	9.7	8.8
Aid per capita (current US$), 2000, 2002[a]	44.4	44.5
Selected indicators of expenditure on health[g]	**Year 1998**	**Year 2002**
Total expenditure on health as % of GDP	4.2	5.1
General government expenditure on health as % of total expenditure on health	36.8	45.2
Private sector expenditure on health as % of total expenditure on health	63.2	54.8
Social security funds as % of general government expenditure on health	18.9	14
Prepaid and risk-pooling plans as % of private sector expenditure on health	2.2	3.5
Private households' out-of-pocket payment as % of private sector expenditure on health	97.8	96.5
External resources on health as % of total expenditure on health	13.1	16.9
Total expenditure on health per capita at international dollar rate	44	62
General government expenditure on health per capita at international dollar rate	16	28

Sources:
[a] World Development Indicators, selected years (http://devdata.worldbank.org/dataonline/ accessed 21 July 2005).
[b] WHO (5).
[c] WHO Statistical Information System, selected years (http://www3.who.int/whosis/menu.cfm accessed 18 July 2005).
[d] UNDP (2).
[e] UNICEF statistics, 2003 (http://www.childinfo.org/areas/childmortality/infantdata.php accessed 13 July 2005).
[f] WHO (3).
[g] National health accounts, selected years (http://www.who.int/nha/country/en/ accessed 21 July 2005).
[h] Year 2000.
[k] Last available year, 2001.

SRI LANKA

Population estimates	**Year 1993**	**Year 2003**
Population total[a]	16 850 000	19 231 760
Annual population growth rate (%) 1993-2003[b]	–	0.9
Dependency ratio (per 100)[b c]	57	46
Total fertility rate[b c]	2.4	2.0
Macroeconomic indicators[a]	**Year 1993**	**Year 2003**
GDP (current US$)	10 353 460 000	18 237 460 000
GDP growth (annual %)	6.9	5.9
GDP per capita, PPP (constant 2000 international $)	2642	3569
Central government debt, total (% of GDP)	96.8	105.5[k]
Current account balance (% of GDP)	-3.7	-0.7
Foreign direct investment, net inflows (% of GDP)	1.9	1.3
Exports of goods and services (% of GDP)	33.8	35.8
Imports of goods and services (% of GDP)	43.3	42.4
Inflation, consumer prices (annual %)	11.7	6.3
Official exchange rate (LCU per US$, period average)	48.3	96.5
Social indicators		**Year**
Human development index (HDI) value[d]	0.751	2003
Population living below the national poverty line (%), (most recent 1990–2002)[d]	25	1990–2002
Rural population (% total population)[a]	76.2	2003
Adult literacy rate[c]	92.1	2005
GINI coefficient[a]	33.2	2000
Health status[c]	**Year 2000**	**Year 2002 or 2003**
Adult mortality (per 1000) female, 2000, 2003	124	120
Adult mortality (per 1000) male, 2000, 2003	244	235
Healthy life expectancy at birth (years) females, 2000, 2002	64	64
Healthy life expectancy at birth (years) males, 2000, 2002	59	59
Life expectancy at birth (years) females, 2000, 2003	75	75
Life expectancy at birth (years) males, 2000, 2003	68	68
Health Millennium Development Goals	**Year 2000**	**Year 2003**
Infant mortality rate – both sexes (per 1000 live births)[e]	16	13
Under-five mortality rate – both sexes (per 1000 live births)[c]	19.8	15
Population with sustainable access to an improved water source (%), 2002[a]	–	78
Population with access to improved sanitation (%), 2002[a]	–	91
Children under two years immunized with one dose of measles (%)[b]	–	99
Birth attended by skilled health personnel (%)[f]	94.1	–
Maternal mortality ratio (per 100 000 live births)[f]	92	–
Children under five years of age underweight for age (%)[f]	32.9[h]	–
HIV prevalence among 15–49-year-olds (%)[f]	<0.1	–
Malaria mortality rate (per 100 000)[f]	6	–
Tuberculosis prevalence (per 100 000)[f]	97	–
Tuberculosis mortality rate (per 100 000)[f]	9	–
Health system profile[c]	**Value**	**Year**
Number of physicians per 10 000	3.7	2002
Number of nurses per 10 000	7.9	2000
Number of health workers per 10 000	11.6	2000/02
Hospital beds per 10 000	22	1999

Public budget	Year 1990 or 2000	Year 2002 or 2003
General government expenditure on health as % GDP, 2000, 2002[g]	1.8	1.8
General government expenditure on health as % of general government expenditure, 2000, 2002[g]	6.1	6
Public expenditure on education (% of GDP), 1990, 2000–2002[d]	2.7	–
Public expenditure on education (as % of total government expenditure), 1990, 2000–2002[d]	8.1	–
Military expenditure (% of GDP), 1990, 2003[d]	2.1	2.7
Military expenditure (% of central government expenditure), 2000, 2002[a]	19.7	13.6
Tax revenue (% of GDP), 2000, 2002[a]	14.5	14.0
Total debt service (% of GDP), 1990, 2003[d]	4.8	3.3
ODA received (net disbursements) (as % of GDP), 2000, 2002[a]	1.7	2.1
Aid per capita (current US$), 2000, 2002[a]	15.0	18.1
Selected indicators of expenditure on health[g]	**Year 1998**	**Year 2002**
Total expenditure on health as % of GDP	3.4	3.7
General government expenditure on health as % of total expenditure on health	51.3	48.7
Private sector expenditure on health as % of total expenditure on health	48.7	51.3
Social security funds as % of general government expenditure on health	0	0
Prepaid and risk-pooling plans as % of private sector expenditure on health	1	1
Private households' out-of-pocket payment as % of private sector expenditure on health	94.9	95.1
External resources on health as % of total expenditure on health	2.8	1.9
Total expenditure on health per capita at international dollar rate	102	131
General government expenditure on health per capita at international dollar rate	52	64

Sources:
[a] World Development Indicators, selected years (http://devdata.worldbank.org/dataonline/ accessed 21 July 2005).
[b] WHO (5).
[c] WHO Statistical Information System, selected years (http://www3.who.int/whosis/menu.cfm accessed 18 July 2005).
[d] UNDP (2).
[e] UNICEF Statistics, 2003 (http://www.childinfo.org/areas/childmortality/infantdata.php accessed 13 July 2005).
[f] WHO (3).
[g] National health accounts, selected years (http://www.who.int/nha/country/en/ accessed 21 July 2005).
[h] Year 1995.
[k] Last available year, 2002.

YEMEN

Population estimates	Year 1993	Year 2003 or 2004
Population total, 2003[a]	14 312 000	19 173 160
Annual population growth rate (%), 2004[b]	–	3.0
Dependency ratio (per 100), 2003[c, d]	113	103
Total fertility rate, 2004[c, d]	7.8	6.2
Macroeconomic indicators[a]	**Year 1993**	**Year 2003**
GDP (current US$)	4 900 925 000	10 830 570 000
GDP growth (annual %)	4.1	3.8
GDP per capita, PPP (constant 2000 international $)	664	840
Central government debt, total (% of GDP)	–	–
Current account balance (% of GDP)	-25.5	1.4
Foreign direct investment, net inflows (% of GDP)	18.4	-0.8
Exports of goods and services (% of GDP)	27.4	31.2
Imports of goods and services (% of GDP)	64.9	35.9
Inflation, consumer prices (annual %)	35.8	10.8
Official exchange rate (LCU per US$, period average)	12.0	183.4
Social indicators	**Value**	**Year Year**
Human development index (HDI) value[e]	0.489	2003
Population living below the national poverty line (%), (most recent 1990–2002)[e]	41.8	1990-2002
Rural population (% total population)[a]	74.3	2003
Adult literacy rate[d]	49	2005
GINI coefficient[a]	33.4	1998
Health status[d]	**Year 2000**	**Year 2002 or 2003**
Adult mortality (per 1000) female, 2000, 2003	226	227
Adult mortality (per 1000) male, 2000, 2003	278	298
Healthy life expectancy at birth (years) females, 2000, 2002	49	51
Healthy life expectancy at birth (years) males, 2000, 2002	49	48
Life expectancy at birth (years) females, 2000, 2003	62	61
Life expectancy at birth (years) males, 2000, 2003	59	57
Health Millennium Development Goals	**Year 2000**	**Year 2003**
Infant mortality rate – both sexes (per 1000 live births), 2000[f], 2003[g]	84	75
Under-five mortality rate – both sexes (per 1000 live births)2000[d], 2003[g]	110	102
Population with sustainable access to an improved water source (%), 2002[a]	–	69
Population with access to improved sanitation (%), 2002[a]	–	30
Children under two years immunized with one dose of measles (%)[c]	–	66
Birth attended by skilled health personnel (%), 2000[h], 2003[g]	22	25
Maternal mortality ratio (per 100 000 live births), 2000[h], 2003[g]	570	361
Children under five years of age underweight for age (%), 1997[h], 2003[g]	46.1[m]	45.7
HIV prevalence among 15–49-year-olds (%)[h]	0.1	–
Malaria mortality rate (per 100 000)[h]	8	–
Tuberculosis prevalence (per 100 000)[h]	178	–
Tuberculosis mortality rate (per 100 000)[h]	13	–
Health system profile[d]	**Value**	**Year**
Number of physicians per 10 000	2.2	2001
Number of nurses per 10 000	4.5	2001
Number of health workers per 10 000	6.7	2001
Hospital beds per 10 000	6	2001

Public budget	Year 1990 or 2000	Year 2002 or 2003
General government expenditure on health as % GDP, 2000, 2002[k]	1.5	1.0
General government expenditure on health as % of general government expenditure, 2000, 2002[k]	4.9	3.5
Public expenditure on education (% of GDP), 1990, 2000–2002[e]	–	9.5
Public expenditure on education (as % of total government expenditure), 1990, 2000–2002[e]	–	32.8
Military expenditure (% of GDP), 1990, 2003[e]	7.9	7.1
Military expenditure (% of central government expenditure), 1999[a]	22.6[n]	–
Tax revenue (% of GDP), 1999[a]	9.4[n]	–
Total debt service (% of GDP), 1990, 2003[e]	3.5	1.6
ODA received (net disbursements) (as % of GDP), 2000, 2002[a]	2.8	5.8
Aid per capita (current US$), 2000, 2002[a]	15.1	31.4
Selected indicators of expenditure on health[k]	**Year 1998**	**Year 2002**
Total expenditure on health as % of GDP	4.9	3.7
General government expenditure on health as % of total expenditure on health	34.7	27.2
Private sector expenditure on health as % of total expenditure on health	65.3	72.8
Social security funds as % of general government expenditure on health	NA	NA
Prepaid and risk-pooling plans as % of private sector expenditure on health	NA	NA
Private households' out-of-pocket payment as % of private sector expenditure on health	87.7	85.8
External resources on health as % of total expenditure on health	7.7	3
Total expenditure on health per capita at international dollar rate	69	58
General government expenditure on health per capita at international dollar rate	24	16

Sources:

[a] World Development Indicators, selected years (http://devdata.worldbank.org/dataonline/ accessed 21 July 2005).
[b] Central Statistical Organization, Yemen (10)
[c] WHO (5).
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[m] Year 1997.
[n] Last available year, 1999.

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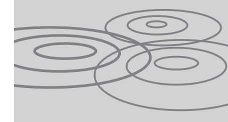
Annex 2

Chronic disease: the call to action

The Oxford Health Alliance



www.oxha.org
Confronting the Epidemic of Chronic Disease

Chronic disease: the call to action[29]

Health is a basic human right – and a healthy population is a prerequisite for economic development

A global pandemic: the extent of the problem

Chronic (or noncommunicable) diseases such as cardiovascular disease and diabetes account for 60% of deaths worldwide. With the exception of Africa, chronic diseases kill and disable more people than HIV/AIDS, tuberculosis and malaria, singled out for special attention by the Millennium Development Goals.

Putting pay to the misconception that chronic diseases affect primarily the affluent, cardiovascular disease (CVD) has become the leading cause of death in some developing countries – 80% of the deaths from CVD and 87% of CVD-related disability occur in low- or middle-income countries (1). By 2020, 70% of the 10 million deaths due to tobacco each year will occur in developing countries. Today's bad habits are helping to ignite a global pandemic of chronic disease.

Between 1990 and 2020, the percentage of deaths attributable to chronic diseases globally will rise from 55.5% to 72.6%, with a corresponding increase in disability.

Costs of chronic disease

Chronic diseases are sometimes – and erroneously – dismissed as affecting only those of retirement age and, therefore, as having only a limited impact on the economy. However, a substantial share of the mortality due to chronic disease will in future fall on those of prime working age.[30] Increased morbidity will also reduce productivity and limits individuals' capacity to participate in the labour force. Coping mechanisms – such as removing young girls from education to care for a sick family member – should also be factored into the cost.

McKinsey predicts that, by 2008, Fortune 500 companies' health-care costs will be greater than total net profits.

The costs are already staggeringly high. In the United States, the American Diabetes Association estimated the direct cost of diabetes in 2002 to be US$ 92 billion (up from US$ 44 billion in 1997). In Mexico, the total cost of diabetes (including indirect costs) is estimated at US$ 320 million for 2005 (a 25% increase in three years). Failure to address the risk factors will see this escalation in costs continue.

Chronic disease can have a devastating effect both on the financial health of families and on states' macroeconomic health, as adult mortality is a reliable predictor of subsequent economic growth. The health agenda must be rebalanced to take the long-term economic effects of chronic disease into account.

29 Contribution by the Oxford Health Alliance, July 2005: www.oxha.org.
30 M. Suhrcke et al. *The economic rationale for combating chronic disease.* London, Oxford Health Alliance, forthcoming.

The risk factors

The problem is becoming more acute, as behavioural change drills down into developing societies. Locally produced, fresh foods are replaced by processed, cheap, tasty products – that are high in calories, sugar, salt and fat. Urbanization leads to more sedentary lifestyles. Tobacco is readily available – smoking in many developing countries is increasingly the norm. The poorest groups in society are particularly susceptible to these risks, as they cannot afford to make the more expensive purchases necessary for long-term health – today, the easier choices for the less wealthy are the unhealthy options.

Prevention: a growing trend

The growth in chronic disease can be reversed – but only through concerted action. Clinical care and lifestyle help for those who are already presenting symptoms of the diseases are needed, as are programmes aimed at preventing or delaying the onset of disease. Prevention must be targeted at those most at risk, and can also take a broader, population-based approach. The aim is to create a culture within which healthy choices are available to all and are freely chosen.

The need for prevention is increasingly recognized both by governments and by companies in developed countries, which face spiralling costs of healthcare. Interventions addressing the risk factors should involve the whole gamut of stakeholders – including government, society and the individual, business and the international community. The Oxford Health Alliance encourages information-sharing and undertakes advocacy to encourage all stakeholders to take preventive action against the risk factors for chronic disease.

Interventions

There is no one-size-fits-all model to prevent chronic disease. Replication of successful interventions should be encouraged, whether ‘top-down’ government policy or ‘bottom-up’ approaches based in encouraging communities to adopt healthy lifestyles.

Government: policy and persuasion

The role of government

Government’s sphere of influence stretches throughout society to all groups whose buy-in is needed for prevention programmes to be a success. Governments are particularly well placed to assist the most vulnerable – the poorest families and children. The Framework Convention on Tobacco Control (FCTC) and the Global Strategy on Diet, Physical Activity and Health place governments at the forefront of chronic disease prevention.

As individuals cannot accurately foresee the future consequences of lifestyle choices, and therefore make choices that are not perfectly rational, government action on chronic disease is required to correct this ‘market failure’:

- provide health care to those suffering from chronic disease;
- provide information to allow individuals to make better-informed choices;
- change the culture and purchasing environment to ensure that easy choices are the healthy choices.

Research on interventions will encourage governments to act – the requirement in the Global Strategy for research into obesity and lack of exercise could be incorporated as part of the remit of commissions on macroeconomics and health.

Tools

a) *Legislation*
- marketing – restricting advertising of unhealthy products, especially to children;
- education – ensuring that children take part in a variety of sporting activities and attend lessons on nutrition to enthuse them about healthy eating;
- build environments that encourage physical activity – laying cycle paths and providing green spaces in urban areas;
- action against smuggling of cigarettes and importation of inappropriate goods.

b) *Taxation*
- raise taxes on alcohol and tobacco to dissuade unhealthy behaviour;
- provide tax breaks for health schemes (for example, encouraging the 'localization' of food production).

Constraints

The many constraints facing government will only be overcome by strong advocacy backed up with solid research into risk factors and an appreciation of the economic logic behind positive action.

- Economic constraints – namely, competition for funding between public health, defence, education, etc.
- Political constraints – actions that are seen to restrict freedoms (restricting smoking in public places, etc.) may dissuade individuals from voting for the current administration. The immediate right of individuals to make free choices must be balanced against the future economic needs of individuals and society – but by the time the current prevention schemes begin to bear fruit, the administrations of today will be long gone.
- Institutional constraints – for example, preventing global brands from displacing local products may not be possible under free trade agreements.

Community: culture and education

Population-based projects

The most successful prevention programmes are tailored to the communities in which they are based. Such 'population-based' approaches require the involvement of many levels of society to foster changes in attitude to the unhealthy lifestyles that are implicated in chronic disease – although it is not sufficient to educate individuals to recognize that their choice of lifestyle is unhealthy if alternative, healthier options are unavailable.

> Levels of obesity among urban children aged 2–6 in China rose from 1.5% in 1989 to 12.6% in 1997.

Prevention programmes should address the many risk factors of chronic disease. Increased coordination and monitoring of projects allow for successful projects to be replicated at lower cost and reduced risk.

Examples

The Oxford Health Alliance's Community Actions to Prevent Chronic Diseases (CAPCoD) project supports community-based programmes by providing assistance with proposal development and links to key donors. CAPCoD outcomes will be made available to facilitate replication of successful programmes.

- **South Africa:** a tool-kit of school-based interventions will be developed and tested. It will be created for elementary schools, use trained teachers to teach health education, and focus on changing the children's diet and increasing their levels of physical activity. Parents will also be included in awareness-raising programmes.

- **Sao Paulo, Brazil:** a truck will bring fresh fruit and vegetables to underserved communities, where supply is insufficient or unstable. Health fairs will provide health information and give hands-on and enjoyable advice through culinary workshops.

Other groups that could be particularly involved in community-based projects are women's groups (women are often in charge of providing nutrition) and health/education nongovernmental organizations working in deprived areas.

Constraints

Funding for community programmes is limited. Given immediate needs for drinking water and immunization, and as the benefits of chronic disease prevention will not be seen for decades, the programmes under discussion may not be prioritized. However, donors – foundations, governments and charities – are increasingly aware that the long-term benefits, even of small-scale programmes, will vastly outweigh the costs. This is not, of course, to detract from the importance of countering infectious diseases – it is simply to expand the range of diseases that need addressing in developing countries.

Business: opportunity and responsibility

Globalization

Globalization encourages the expansion of business both between and across borders, providing a wealth of new opportunities – including to the food, pharmaceutical and tobacco industries. Business should be encouraged to recognize that the new opportunities need to be balanced with a responsibility not to exacerbate chronic disease, recognizing the risks of obesity and smoking. Further, business leaders are already recognizing their potential role in changing behavioural norms in a way that will encourage sustainable growth in the long term. Voluntary frameworks – such as the United Nations Global Compact – should incorporate chronic disease prevention, to move the issues further up the business agenda.

> China (2000): 67% of men smoked compared with just 4% of women – retaining the norm against women smokers will prevent tobacco companies from exploiting this obvious marketing opportunity.

Stakeholders

a) Employees

- In the developed world, companies are becoming aware of the benefits of encouraging a healthy lifestyle among employees – providing access to exercise equipment, encouraging cycling and healthy eating.
- Falling worker productivity due to chronic disease will affect future returns on investment. Business would be advised to encourage culturally sensitive healthy lifestyle schemes in subsidiaries – or even in the supply chain – in developing countries.

> United States companies – such as PepsiCo and Johnson & Johnson – have seen returns of over US$ 3 for each US$ 1 spent on wellness programmes.

b) Consumers

- The introduction of a vast range of **new foods** may replace more traditional – and often more healthy – goods. Companies should take the lead in incorporating clear nutrition information on packaging and in marketing of new foodstuffs.
- The **tobacco** corporations should take responsibility for their own marketing strategies, rather than being led by regulation, particularly in countries where governments may

not yet have legislated. Advertising aimed at children must be avoided, and consumers warned of the dangers of passive smoking.
- Developing countries' access to drugs to counteract infectious diseases such as HIV/AIDS has been on the agenda for years – **pharmaceutical** corporations should also prioritize aspirin, antihypertensives, and smoking-cessation drugs.

Constraints

Legislative frameworks and pressure from shareholders to maximize profits currently constrain businesses – although social agendas are increasingly important. Governments may not be in a position to legislate to prevent irresponsible behaviour, particularly of major investors, and consumers may choose to purchase unhealthy goods. However, acting responsibly within the company's sphere of influence is increasingly important for reputation. Businesses that act early and decisively on prevention are likely to reap benefits in terms of brand reputation and awareness, employee health, and access to new markets in the developing world.

International community: awareness and assistance

The international community will inevitably be drawn into a discussion on how best to stem the spread of chronic disease within low- and middle-income countries. However, the trade and investment framework makes it difficult to slow the nutrition transition, as there is an unchecked flow of cheap, unhealthy goods into developing societies. The potentially devastating impact of chronic disease should be a factor in revising and negotiating trade and investment agreements. International law **can** have an impact – the FCTC has already led to increases in tobacco tax and marketing restrictions.

Any alteration to the trade and investment framework is unlikely to be an orderly transition, given the entrenched interests involved. In 1999, of the 100 largest economies in the world, 51 were not nation states but companies. Considering their enormous economic impact, the active collaboration of the major corporations – the giants of the food and tobacco industries among them – is a prerequisite for successful, positive action.

Conclusion

It is now within the power of the global economic system to transform developing countries into developed economies. However, once states are pulled out of the most abject poverty, a health backlash can occur. As wealth trickles down to low- and middle-income countries, the systems and norms must be in place to ensure that individuals have the capability as well as the desire to maintain healthy lifestyles. Interventions by all stakeholders and at all levels are necessary, and coordination between projects and programmes, learning from the successes and failures to date, should be a priority.

We are at a unique point on the health timeline – taking action now against the risk factors of chronic disease will go some way towards stemming a future pandemic. Failure to act would be unconscionable.

Reference

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