

Chapter 1

A message to ministers of finance: health and health research are possibly the best economic investments

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Section 1

Investments in health and health research rank among the most productive investments for both individuals and the economy as a whole

1. The costs of bad health and the benefits of better health for individuals

For the average person in a low- or middle-income country, falling sick for any length of time seriously endangers the economic situation and well-being of both the individual and their family, in the short and long term, for the following reasons:

- bad health will have a severe impact on the individual's level of income (treatment costs, immediate loss of revenue, longer term loss of revenue due to reduced work opportunities, revenue losses due to premature death);¹
- it will decrease the capacity of the individual or other family members to acquire an education;
- it will also affect the family's productive opportunities as some members of the family will be called upon to help the member who has fallen ill;
- if ill health persists, the family may fall into absolute poverty (due to loss of income and the "catastrophic payments" needed to regain health);
- finally, it will decrease substantially both their own and their family's psychological well-being.

Therefore it is not surprising that in a survey commissioned by the United Nations in preparation the Millennium Summit in September 2000, respondents from around the world overwhelmingly ranked health as

their "number one" desire.² Nor is it a coincidence that "good wishes" cards for the New Year from anywhere in the world normally include health as one of the top wishes. There seems to be a wide consensus among people throughout the world that health is their primary asset.

If the United Nations poll had focused exclusively on the poor in these countries, it is likely that the answers would have been even more forceful, since for them and their family, bad health may make the difference between life and death, as a result of the vicious circle of poverty and ill health, in one or more of the following ways:

- disease for one member of the family means an increase in malnutrition as a result of additional spending on treatment;
- malnutrition increases the risk of unemployment or underemployment, further reducing family revenues;
- an already poor housing situation risks further deterioration;
- both the sick and the family members looking after them miss opportunities for education and training in the formal or informal sector;
- in the long run, the already low productivity level of the family may further decrease in the competitive environment;
- access to health care services, safe drinking water and social services in general may become even more precarious as a result of

¹ Report of the Commission on Macroeconomics and Health, *Macroeconomics and Health: Investing in Health for Economic Development*, December 2001.

² Millennium Poll, United Nations, New York, 2000.

- lower revenues and less education;
- poorer families tend to have more children, in the hope that at least one of them will support the parents in old age (a form of long-term insurance);
- there is an elevated risk of unwanted pregnancies and substance abuse;
- the sale of assets for survival may force the family to move to a more degraded environment;
- the overall impact is to reinforce the powerlessness of the family members, putting at risk the survival of the family itself.

In the higher income countries, the effects of bad health on the economic situation of individuals are mitigated, at least in the short run, by public and social insurances and the social system in general. However, even in these countries, in the long run the negative effects are felt by individuals, especially those at the lower end of the socioeconomic ladder.

In summary, bad health will directly and profoundly affect the economic situation and well-being of any individual in any society. This is particularly true in the lower income countries (as their social safety nets are weaker or non-existent) and for the absolute poor, due to the vicious circle of poverty and ill health.

Conversely, better health will boost the individual's level of income (lower treatment costs, increased revenue, longer term increase in revenue due to better work opportunities, increase in revenues due to longer life-expectancy); it will increase the individual's capacity to acquire an education; it will increase the family's productive opportunities by freeing the members who would otherwise have been called upon to care for the sick; and it will increase substantially the psychological well-being of both the individual and the family. The benefits of good health will be

even greater for the absolute poor, as they may transform the vicious circle of poverty into a virtuous circle, with better nutrition, lower risks of unemployment or underemployment, better housing, better use of training opportunities, higher productivity, and, overall, better control over the individual's life situation and that of the family.

2. Costs of bad health and benefits of better health for the economy as a whole

The costs of bad health for the economy as a whole are enormous and correspond to: (a) the sum of the individual losses mentioned above in all their dimensions; and (b) the losses resulting from the so-called externalities.

In summary, bad health means irrecoverable losses in production due to the absence of the sick labour force and of the relatives who may be called upon to help the sick. It also means a less well trained labour force as education and training opportunities are missed by the absentees. Furthermore, it absorbs resources for treating illnesses (both human and financial) that could otherwise be invested in alternative activities. The so-called externalities include lower productivity in general, a less competitive economy, lower profitability of enterprises, higher labour force turnover and disruption in the national budget. In the long run, bad health will endanger the survival of the less competitive enterprises as well as the country's ability to attract foreign investments. Employment opportunities in the economy will be lower, increasing the number of unemployed. Other externalities will take the form of a higher rate of disease transmission due to the larger size of the population that is sick.

Conversely, the benefits of better health for the economy are also enormous. They include an increase in production, a better trained and

more productive labour force, increased competitiveness of the economy, financially more solid enterprises, lower unemployment and a lower rate of disease transmission. Needless to say, the whole process is complex and difficult to quantify, but even very conservative estimates suggest that health investments are yielding the highest rates of return compared to other public investments. A few examples are given below.

The dramatically negative impact of bad health and the large benefits from better health, for both individuals and economies as a whole, have been again underlined in a number of recent international conferences and reports.³

3. A few examples

Southern Europe in the 1940s and 1950s

The Report of the Commission on Macroeconomics and Health⁴ suggests that the take-off in economic growth in the southern European countries such as Greece, Italy, Spain and Portugal in the 1940s and 1950s was linked to the dramatic reduction in the incidence of malaria and other severe diseases in these countries during this period.

Smallpox

In the 1950s, it is estimated that smallpox killed more than 5 million people a year and that over 1 million people a year were blinded and over 10 million people disfigured by the disease. Following the adoption of vaccination programmes by a large number of

countries, these figures were dramatically reduced in the latter part of the 1960s. By 1968, the annual cost of smallpox vaccination, quarantine programmes and treatment had reached US\$ 300 million worldwide. By contrast, the entire eradication programme, which was launched in 1967, cost a total of US\$ 300 million over 12 years.⁵ The economic benefits of the eradication of smallpox probably reach into the tens of billions of dollars per annum, i.e. a return of more than US\$ 10 for every dollar invested. This rate of return is exceptional, even in the health and health research sectors. It is a multiple of even the highest rates of return in any other sector of the economy, where a return of US\$ 1.2-US\$ 1.5 for every dollar invested is more the norm (not taking into account the large deficits experienced in some sectors following huge investments, e.g. in the heavy industry, tourism or transportation sectors). Yet the vote to pursue smallpox eradication was adopted by the World Health Assembly in 1966 by a two-vote margin.⁶

Polio

Polio is also likely to be eradicated in the near future. Until the discovery of Sabin's oral polio vaccine in 1961, about half a million people were permanently paralyzed by the disease every year. In 1988, the disease was still endemic in more than 125 countries, disabling about 350 000 people a year. Today, following the efforts of the Global Polio Eradication Initiative, polio is endemic in only seven countries. In 2003, there were about

³ United Nations Millennium Summit, September 2000.

People's Health Assembly. *People's Charter for Health*, December 2000.

World Bank. *World Development Report 2000/2001, Attacking Poverty*, September 2000.

Commission on Macroeconomics and Health. *op.cit.*

WHO. *The World Health Report 2002, Reducing Risks, Promoting Healthy Life*.

UNDP. *Human Development Report 2003, Millennium Development Goals: A compact among nations to end human poverty*, New York, 2003.

Global Forum for Health Research, Forum 7, Geneva, 2-5 December 2003.

⁴ Commission on Macroeconomics and Health. *op.cit.* (page 39).

⁵ World Bank. *World Development Report 1993, Investing in Health*, Washington D.C., 1993 (p.17).

⁶ Commission on Macroeconomics and Health. *op.cit.* (page 43).

700 cases of the disease. It is estimated that the world may be certified polio-free by 2008.

An estimated US\$ 370 million is needed to carry out the remaining vaccination campaigns⁷ but the eradication of polio will result in savings and economic benefits amounting to billions of dollars every year, i.e. once again a return of several dollars for every dollar invested.

*Onchocerciasis*⁸

Onchocerciasis (river blindness) is a parasitic disease which causes unbearable itching, disfigurement and ultimately blindness. The total cost to date of the Onchocerciasis Control Programme and its successor the African Programme for Onchocerciasis Control (1974 to 2003) is estimated at about US\$ 700 million, covering 11 Sahelian countries and a population of 30 million people (which is being gradually expanded to 60 million people in 19 countries), i.e. less than US\$ 1 per person per year. So far, the overall Programme is estimated to have prevented itching in millions of persons, prevented 600,000 cases of blindness, and opened up 25 million hectares of agricultural land, enough to feed 17 million people a year.

Malaria

Malaria causes at least 300 million cases of acute illness and more than one million deaths per year, with severe economic consequences for the countries concerned. It is estimated that production losses due to malaria cost the African economies US\$ 12 billion a year.⁹ The Commission on Macroeconomics and Health estimated that an economy affected by malaria will experience a

rate of growth about 1% lower than a malaria-free economy, adding up to a difference of about 25%-30% over a generation. While these calculations are subject to considerable uncertainty, the orders of magnitude point to the central role of health in economic development and are supported by individual experiences.

*HIV/AIDS*¹⁰

More than 60 million people worldwide have been infected with HIV/AIDS, and of these, an estimated 20 million have died. About 5 million new infections occur every year, more than half of them among young people under 25. About 30% of those with HIV/AIDS are co-infected with TB. AIDS is now the leading cause of death in sub-Saharan Africa and the fourth leading cause of death worldwide. This situation has dramatic economic consequences for the countries worst affected, adding up to tens of billions of dollars in lost production, and could reverse the economic gains achieved in recent decades.

Massive investments in prevention would amount to a small fraction of the economic costs of the disease. Successful examples have been demonstrated in Thailand, Uganda and Brazil. Treatment costs are currently estimated at US\$ 500-US\$1000 per patient per year and the WHO "3 by 5" Initiative aims to provide access to treatment for 3 million people in low-income countries by 2005.

*Success stories in developing countries*¹¹

In a joint publication with partner agencies in 2000, WHO highlighted a large number of effective medicines and other interventions for HIV/AIDS, TB, malaria, childhood diseases

⁷ Brundtland GH. *Health: The Key to Human Development*, EXPO 2000 (page 77).

⁸ World Bank 1993. op.cit. (page 19) and Onchocerciasis website at WHO and World Bank.

⁹ Roll Back Malaria published data.

¹⁰ UNAIDS published data.

¹¹ WHO, UNICEF, UNAIDS, World Bank, UNESCO, UNFPA. *Health: A Key to Prosperity, Success Stories in Developing Countries*, Geneva, 2000.

and maternal and perinatal conditions which have been applied in low- and middle-income countries with high rates of return on investment. Examples of these include:

- Anti-TB medicines are 95% effective in curing TB and cost US\$ 10 for a six-month course of treatment.
- Oral rehydration therapy is highly effective in treating dehydration caused by diarrhoeal diseases and costs US\$ 0.33 per treatment.
- Antibiotics for pneumonia are 90% effective and cost US\$ 0.27 per dose.
- Antimalarials are 95% effective and cost US\$ 0.12 per dose.
- Bednets can reduce child deaths due to

malaria by 25% and cost US\$ 4 for an insecticide-treated bednet.

- Vaccines are 85% effective in preventing measles and cost US\$ 0.26 per dose.
- Latex condoms are highly effective in preventing HIV and cost US\$ 14 per person for a year's supply.

Macroeconomic calculations

In 2001, the Commission on Macroeconomics and Health, recognizing the high rates of return on investments in health for both the individuals and the countries concerned, recommended a massive increase in these investments in the coming years (Insert 1.1). From an estimated level of US\$ 53.5 billion in

Insert 1.1

Commission on Macroeconomics and Health

Recommended country and donor commitments for health and global public goods, 2001- 2015 (in billions of constant 2002 US\$)

Financing	2001	2007	2015	Increase 2001-2015
Country financing				
• Least Developed Countries	7.0	11.0	16.0	9.0
• Other low-income countries	43.0	62.0	74.0	31.0
• Middle-income countries	n.a.	n.a.	n.a.	n.a.
Donor assistance to countries¹²				
• To Least Developed Countries	1.5	14.0	21.0	19.5
• To other low-income countries	2.0	6.0	8.0	6.0
• To middle-income countries	2.0	2.0	2.0	0.0
Donor assistance for global public goods				
• Global health research fund	0.0	1.5	2.5	2.5
• Other R&D	<0.5	1.5	1.5	1.0
• International agencies	1.0	2.0	3.0	2.0
Total donor assistance (commitments) to countries and global public goods	7.0	27.0	38.0	31.0

Source: Commission on Macroeconomics and Health

¹² Including contributions to the Global Fund to Fight AIDS, TB and Malaria for amounts of US\$ 8 billion and US\$ 12 billion in 2007 and 2015 respectively.

2001, the Commission recommends a more than doubling of investments in health in the least-developed and other low-income countries over the 14-year period to 2015, to reach US\$ 119 billion in 2015. This increase of US\$ 65.5 billion would be financed by an increase in country-level commitments of US\$ 40 billion and an increase in donor assistance of US\$ 25.5 billion (from an estimated US\$ 3.5 billion in 2001 to US\$ 29 billion in 2015).

Given the expected high rates of return on such investments, the Commission estimates that the increased investment of about US\$ 65

billion per annum by 2015 would increase the Gross Domestic Product (GDP) of the countries concerned by at least US\$ 186 billion, i.e. a rate of return of US\$ 3 for every dollar invested. The benefits could be much higher and reach US\$ 4 or US\$ 5 for every dollar invested if less conservative assumptions are made regarding (a) the impact of the health programmes and (b) the contribution of healthy life years to the growth of GDP. Such high rates of return are mostly unheard of in other sectors of the economy.

Section 2

Why such low investments in health?

Insert 1.2 summarizes the amount spent on health by governments, donors and private individuals.

The Commission on Macroeconomics and Health estimated that the minimum level of health spending needed in low-income countries to cover essential interventions is

US\$ 30-US\$ 40 per person per year (as compared to the estimated current level of US\$ 11 and US\$ 25 in the least developed and the other low-income countries respectively). This means that the level of health in these countries may continue to deteriorate in the coming years unless urgent and large-scale actions are undertaken in the very near future.

Insert 1.2

Health spending per capita by level of development

Development category	Tax revenue (% of GDP)	Health spending per capita (in US\$)			
		Public	Donors	Private	Total
Least Developed Countries	14%	6.0	2.3	2.7	11.0
Other low-income countries		13.0	0.9	11.1	25.0
Lower middle-income countries	19%	51.0	0.6	41.4	93.0
Upper middle-income countries	22%	125.0	1.1	114.9	241.0
High-income countries	31%	1,356.0	0.0	551.0	1,907.0

Source: Richard Feachem, then Director, Institute for Global Health, University of California. Paper presented at Forum 5, Global Forum for Health Research, October 2001.

Given this large contribution of health to the development of the national economy and the fact that citizens around the world overwhelmingly rank health as their “number one” desire, why are governments not investing a larger proportion of public resources in health?

The main reasons include the following:

1. Traditional reluctance to apply concepts of rates of return on investments in health

There has been a traditional reluctance on the part of public officials (and economists) to apply the tools of economic analysis to the delivery of health services, as this gives the impression that people's health is treated as a simple commodity. It is often considered derogatory to try to apply “rates of return calculations” to expenditures in this sector.

To avoid this political trap, officials described the health sector as a “social sector”, with the understanding that social sectors should receive high priority in the allocation of public funds. However, this high priority was never defined and therefore open to free interpretation. As a result, allocations of public funds to this sector never had to *compete* formally with the so-called economic sectors (e.g. transportation, electricity, telecommunications, agriculture, industry, credit, forestry and tourism). However, this apparent advantage turned out to be a disadvantage in many cases and many countries as health as a sector never had the chance to *demonstrate* its considerable contribution to economic growth and development. The direct negative consequences of this situation were the following:

- a) allocations of public funds to this sector remained largely arbitrary, based on the respectively favourable or unfavourable political circumstances in each country;
- b) the extremely high rates of return on

investments in health (as summarized in section 1 above) were largely overlooked;

- c) investments in this sector remained below the level they would have reached if the contribution of health to growth and development could have been better taken into consideration, on the basis of the application of systematic tools.

2. Complexity of the calculations

Another reason for the public sector's under-investment in health relative to its potential contribution to growth and development is the difficulty involved in assessing the impact of such investment on health, production and the overall well-being of society. The complexity of the calculations is linked to the number of variables and uncertainty regarding the links between these variables and the outcomes of these investments. Other sectors are not confronted with the same degree of complexity and uncertainty. Although a possible explanation, the complexity and uncertainty of the calculations are no excuse for the under-investment by the public sector in health. Relatively simple calculations, with very conservative assumptions as to the expected impact of the investments on people's health, show rates of return which are a multiple of the normal rates of return expected from investments in other sectors of the economy.

3. Health often considered as a consequence of the development process rather than one of its engines

Improvements in health are partly due to an increase in the standard of living of a society, i.e. of rising incomes leading to greater purchasing power for improved nutrition, housing, water and medical services. Similarly, improvements in health are due to the impressive increase in the average level of education, which has led to better

understanding by families of the importance of nutrition, hygiene and sanitation.¹³ As a result, public officials have tended to rely on the development process to bring health to the people and to consider health as a consequence of the development process rather than one of its engines. In this sense, health has traditionally mostly been valued for its social welfare and redistributive role,¹⁴ and considered by officials and citizens alike more as a consumption item than an investment. This is of course a serious mistake which explains, at least in part, the massive under-investment in health by the public sector, to the benefit of other sectors with lower impact on growth and development.

4. Health pays only if all conditions are fulfilled for high rates of return

In many cases, the potentially very high rate of return for the economy and society from investing in health has been considerably reduced and possibly wiped out by the following factors:¹⁵

(a) *Poor governance of health services:* including poor leadership, poor management, lack of appropriate incentives, constant turnover, corrupt practices in nominations and procurement, lack of accountability and lack of public service motivation.

(b) *Concentration on the urgent and the visible at the expense of the efficient and effective:* thus, high-cost treatment of acute cases in secondary and tertiary facilities is absorbing a high portion of the public health budget at the expense of preventive actions with much higher benefits for the population as a whole, such as primary health care, immunization and nutrition.

(c) *The problem is compounded by the fact that public health services tend to serve the richer section of the population* which is better informed and has better access to health services, at the expense of the population as a whole, particularly the poor, thus foregoing an important part of the benefits of investing in health. According to Nancy Birdsall, “oral rehydration therapy, which is of far more benefit to rural populations with little access to safe water, is likely to be a less popular item in the budget than increasing the availability of antibiotics in urban health centres.”

(d) *The bias of the public health services in favour of the urban richer populations in tertiary centres squeezes out the funding left for preventive services* that would benefit the overall population. It may even substitute, in some cases, public funding for private funding (in cases of patients with private health insurance), thus wiping out the benefits of an increase in public funding.

The factors described above will considerably reduce the rates of return on an increase in public funding for health services and may cause public officials to decide against such an increase in public funding for health, even though there is a very strong theoretical case for much larger public budget allocations to health.

These factors explain why, for the same level of per capita spending on health services, some countries obtain very high results in terms of public health while, for other countries, the return on public health investments remains very limited.¹⁶

¹³ Birdsall N. *Ignorance Should Not Be Bliss: Policy Research on Health Systems and Health Services in Developing Countries*, Paper presented at Forum 7, Geneva, December 2003. Nancy Birdsall is President, Center for Global Development, Washington, DC.

¹⁴ Rodriguez-Garcia R and Goldmann A. *The Health Development Link*, PAHO/WHO, 1994.

¹⁵ Birdsall. op. cit.

¹⁶ WHO. *World Health Report 2000, Health Systems: Improving Performance*, Geneva, 2000.

Section 3

Health: moving closer to the centre of the development agenda

1. Evolution of the concept of development

The concept of development has evolved considerably over recent decades. At the risk of oversimplifying, in the 1960s the donor community largely believed that the way to advance development was through the financing of basic infrastructure projects, for example in the fields of electricity, transportation and telecommunications. The preparation and management of such projects was also somewhat less complex than projects in many other sectors. This was followed and complemented by major efforts in the 1970s to develop agriculture, industry and the financial sector. Macroeconomic stability and appropriate global economic policies were then thought to be crucial conditions for growth and development and were added to the development agenda. In the late 1970s and 1980s, the fight against poverty became a major objective of the development community, together with programmes in the fields of environment, health, education and social safety nets, *representing a shift from a focus on physical capital to an emphasis on human capital.* Furthermore, the concept of good governance and citizen participation became “key elements of the strategies which now focus on countries rather than on projects or sectors”.¹⁷ This evolution in the concept of development has been reflected since 1990 in the Human Development Index (HDI)¹⁸ and

other such indices developed by the United Nations Development Programme (UNDP), providing alternatives to the traditional GDP per capita as a measure of development.

Gradually, a fundamental distinction was made between human development (an objective) and economic growth (a means to reach the objective). According to the UNDP *Human Development Report 2003*,¹⁹ the main components of human development are living a healthy life, being educated, having a decent standard of living (thus eliminating poverty and hunger) and enjoying political and civil freedoms to participate in the life of one's community. Poverty is the negation of human development in all its dimensions. Economic growth is a tool to reach human development and not an objective in itself. But human development will promote economic growth, which in turn will advance human development.

In this virtuous circle, it is important to be sure which one is the objective (human development) and which one the tool (economic growth) because economic growth will not automatically translate into human development without a clear political will in the public sector.

This evolution from physical capital to human capital has led to a parallel evolution in the

¹⁷ Ingram GK. "The Challenges of Development Evaluation: Some Conclusions", in *World Bank Operations Evaluation Department, The First 30 Years*, Washington DC, 2003.

¹⁸ The HDI is a summary measure of three dimensions of the human development concept: health, education and standard of living. Three supplementary indices have been developed in the 1990s: the Human Poverty Index (HPI), the gender-related development index (GDI), and the gender empowerment measure (GEM).

¹⁹ UNDP 2003 op. cit. (page 28).

sectoral allocation of aid resources, although not in a linear fashion. Thus, public administration (including economic management, law and justice), health, education, natural resource management and the environment have become increasingly important in the development agenda over the past decade. The health sector, for its part, has seen an increase in its share of total Official Development Assistance (ODA) from an estimated 3.8% in 1990 to 6.8% in 2002, in spite of a decrease in the overall ODA during this period.²⁰

*This evolution culminated in the adoption of the Millennium Development Goals (MDGs) by the United Nations in September 2000.*²¹

2. The Millennium Development Goals

(a) Historical development

It is no exaggeration to say that the United Nations Millennium Declaration, the Road Map towards the implementation of this Declaration, and the MDGs are the best summary of the efforts undertaken by the international community over the past 40 years to find a path for sustainable development for all members of the global community. They succeed in encapsulating both the great achievements of the past 40 years of development cooperation and the great challenges confronting the world today. The MDGs in particular list the most urgent tasks to be accomplished in the coming years under eight goals and 18 targets. These are presented in Insert 1.3.

(b) The place of health in the MDGs

The fight against poverty and ill health are at the centre of the MDGs, together with

education, gender and the environment. Of the eight MDGs, four are explicitly directed to health targets, while the other four are closely associated with health. In other words, after forty years of development cooperation and hard thinking about the concept of development, the MDGs have succeeded in placing health and education at the centre of the development process, both as (i) crucial engines for development and against poverty as well as (ii) the ultimate goals of the development process. For the first time, there was a consensus on a comprehensive agenda for development among the 189 Member States (including 147 Heads of State and Government) who adopted the MDGs in September 2000. Earlier formulations of development had included some of these considerations, at least implicitly, but they had never been formulated so clearly and so universally. This is a major step forward, which has profound policy implications.

What progress have countries made so far in achieving the MDGs?

According to the *Human Development Report 2003*, “since 1990, the East Asia and Pacific region, led by China, has nearly halved extreme income poverty – and is making significant progress on the other Goals as well. For the Arab States and Latin America and the Caribbean, achieving the Goals by 2015 will be challenging but possible. But for other developing regions, achieving the Goals remains a huge challenge. Unless things improve, it will take sub-Saharan Africa until 2129 to achieve universal primary education, until 2147 to halve extreme poverty and until 2165 to cut child mortality by two-thirds.”²²

²⁰ Michaud C. Development Assistance for Health: Recent Trends and Resource Allocation, Paper prepared for the Second Consultation, Coordination on Macroeconomics and Health, Geneva, 29-30 October 2003.

²¹ The UNDP *Human Development Report 2003* argues that the full realization of human development requires more than achieving the MDGs. But achieving the MDGs is a key step towards the full realization of human development.

²² UNDP 2003. op. cit. (page 33).

The World Bank, in a paper prepared for the Development Committee at the September 2003 Annual Meeting, estimated that the aid levels would have to double in order for the MDGs to be achieved. Section 4 below reviews the efforts recently undertaken by the international community to confront the huge challenge of meeting the MDGs by 2015.

3. A common denominator for the MDGs: human security?²³

Is there a common denominator for the MDGs which could represent the ultimate evolution in the concept of development and therefore the ultimate criterion for judging policies and actions on the road to global human development? A possible candidate is “human security”, which was first mentioned in the UNDP *Human Development Report 1994* and much discussed in international meetings and academia since then.

The Report lists seven components of human security:

- health security in a broad sense (including communicable and noncommunicable diseases (NCDs), violence and injuries, and all health risk factors)

- food security
- environmental security
- economic security (including education and training)
- personal security
- community security
- political security.

This definition corresponds to the so-called broad definition of human security. The first four components are generally referred to as “freedom from want”, whereas the last three constitute the “freedom from fear” components (which are also considered as the narrow definition of human security).

Thus it appears that the concept of human security in its broad definition can incorporate the MDGs and constitute a very useful common denominator for judging progress in the field of overall human development, at the micro- and the macro-level, in the field of policies or concrete investments, and for the actions of governments, the private sector, civil society or individuals. It makes a clear distinction between the tools and the ultimate objective of human activity and lends itself to an overall measurement of progress for countries and the international community through the application of a human security audit.

Section 4

Efforts of the international community towards reaching the MDGs: vertical and horizontal approaches

Confronted with the challenge of meeting the MDGs by 2015, the international community has responded by launching new programmes as well as by accelerating and renewing their commitment to existing programmes. Some of these can be described as “vertical approaches” (e.g. targeting specific diseases

and conditions), while others are characterized by a “horizontal approach” (e.g. focusing on improvements in public health services and attacking the basic causes of poverty). Some examples of both approaches are given below.

²³ This section has been written on the basis of a master's thesis by Emily Munro, *The Human Security Network: a case study on the application of a policy of human security by States*, Graduate Institute of International Studies, Geneva, October 2003.

Insert 1.3

Millennium Development Goals (1990-2015)

GOALS AND TARGETS	INDICATORS
Goal 1: Eradicate extreme poverty and hunger Target 1: Reduce by half the proportion of people living on less than a dollar a day. Target 2: Reduce by half the proportion of people who suffer from hunger.	1. Proportion of population below US\$1/day. 2. Poverty gap ratio (incidence and depth of poverty). 3. Share of poorest population quintile in national consumption. 4. Prevalence of underweight children (<5) 5. Proportion of population below minimum level of dietary energy consumption.
Goal 2: Achieve universal primary education Target 3: Ensure that all boys and girls complete a full course of primary schooling.	6. Net enrolment ratio in primary education. 7. Proportion of pupils starting grade 1 who reach grade 5. 8. Literacy rate of 15-24 year-olds.
Goal 3: Promote gender equality and empower women Target 4: Eliminate gender disparity in primary and secondary education preferably by 2005, and at all levels by 2015.	9. Ratio of girls to boys in primary, secondary and tertiary education. 10. Ratio of literate females to males (15-24). 11. Share of women in wage employment in the non-agricultural sector. 12. Proportion of seats held by women in national parliament.
Goal 4: Reduce child mortality Target 5: Reduce by two-thirds the mortality rate among children under five.	13. Under-five mortality rate. 14. Infant mortality rate. 15. Proportion of one-year-olds immunized against measles.
Goal 5: Improve maternal health Target 6: Reduce by three-quarters the maternal mortality ratio.	16. Maternal mortality ratio. 17. Proportion of births attended by skilled health personnel.
Goal 6: Combat HIV/AIDS, malaria and other diseases Target 7: Halt and begin to reverse the spread of HIV/AIDS. Target 8: Halt and begin to reverse the incidence of malaria and other major diseases.	18. HIV prevalence among 15-24 year-old pregnant women. 19. Contraceptive prevalence rate. 20. Number of children orphaned by HIV/AIDS. 21. Prevalence and mortality due to malaria. 22. Proportion of population in malaria risk areas using malaria prevention and treatment. 23. Prevalence and mortality due to tuberculosis. 24. Proportion of TB cases detected and cured.

Source: UN General Assembly, Report of the Secretary-General, *Road map towards the implementation of the United Nations Millennium Declaration*, September 2001.

Insert 1.3 (continued)

Millennium Development Goals (1990-2015)

GOALS AND TARGETS	INDICATORS
<p>Goal 7: Ensure environmental sustainability²⁴</p> <p>Target 9: Integrate the principles of sustainable development into country policies and programmes. Reverse the loss of environmental resources.</p> <p>Target 10: Reduce by half the proportion of people without sustainable access to safe drinking water.</p> <p>Target 11: Achieve significant improvement in lives of at least 100 million slum dwellers, by 2020.</p>	<p>25. Proportion of land area covered by forest.</p> <p>26. Land area protected to maintain biodiversity.</p> <p>27. GDP per unit of energy use.</p> <p>28. Carbon dioxide emissions (per capita).</p> <p>29. Proportion of population with sustainable access to an improved water source.</p> <p>30. Proportion of people with improved sanitation.</p> <p>31. Proportion of people with secure tenure.</p>
<p>Goal 8: Develop a global partnership for development</p> <p>Target 12: Develop further an open trading and financial system that is rule-based, predictable and non-discriminatory, includes a commitment to good governance, development and poverty reduction – nationally and internationally.</p> <p>Target 13: Address the least-developed countries' special needs. This includes tariff- and quota-free access for their exports; enhanced debt relief for heavily indebted poor countries; cancellation of official bilateral debt; and more generous official development assistance for countries committed to poverty reduction.</p> <p>Target 14: Address the special needs of landlocked and small island developing countries.</p> <p>Target 15: Deal comprehensively with developing countries' debt problems through national and international measures to make debt sustainable in the long term.</p> <p>Target 16: In cooperation with developing countries, develop decent and productive work for youth.</p> <p>Target 17: In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries.</p> <p>Target 18: In cooperation with the private sector, make available the benefits of new technologies – especially information and communications technologies.</p>	<p><u>Official Development Assistance (ODA)</u></p> <p>32. Net ODA as percent of DAC donors' GDP (target of 0.7% and 0.15% for LDCs).</p> <p>33. Proportion of ODA to basic social services (basic education, primary health care, nutrition, safe water and sanitation).</p> <p>34. Proportion of ODA that is untied.</p> <p>35. Proportion of ODA for environment in small island developing States.</p> <p>36. Proportion of ODA for transport sector in land-locked countries.</p> <p><u>Market access</u></p> <p>37. Proportion of exports (excluding arms) admitted free of duties and quotas.</p> <p>38. Average tariffs and quotas on agricultural products and textiles and clothing.</p> <p>39. Domestic and export agricultural subsidies in OECD countries.</p> <p>40. Proportion of ODA provided to help build trade capacity.</p> <p><u>Debt sustainability</u></p> <p>41. Proportion of official bilateral HIPC debt cancelled.</p> <p>42. Debt service as per cent of exports.</p> <p>43. Proportion of ODA provided as debt relief.</p> <p>44. Number of countries reaching HIPC decision and completion points.</p> <p>45. Unemployment rate of 15-24 year-olds.</p> <p>46. Proportion of population with access to affordable essential drugs on a sustainable basis.</p> <p>47. Telephone lines per 1000 people.</p> <p>48. Personal computers per 1000 people.</p>

²⁴ The selection of indicators for goals 7 and 8 is subject to further refinement.

1. Examples of vertical approaches

(a) *The Global Polio Eradication Initiative*²⁵

Established in 1988, the Global Polio Eradication Initiative pre-dates the efforts undertaken since 2000 to reach the MDGs. However, the completion of this Initiative is very much part of achieving the MDGs. After the smallpox eradication campaign, this Initiative is one of the most successful public health efforts in history against one of the world's oldest diseases.

It is generally agreed that the achievements of the Global Polio Eradication Initiative (see Section 1.3 above) are the result of a number of key factors, which provide valuable insights for the massive scaling up that will be needed to reach the MDGs. The major factors which contributed to this success include the following:

- A unique partnership forged between governments, international agencies, humanitarian organizations and the private sector: this partnership started in 1988 with the decision of the World Health Assembly to launch an initiative to eradicate polio. WHO, UNICEF, Rotary International and the US Centers for Disease Control and Prevention (CDC) formed the core of this partnership, which developed into an extensive network of national governments, international agencies, private corporations, foundations, bilateral donors, humanitarian organizations, non-governmental organizations (NGOs) and development banks.
- The effective engagement of political leaders: this played a crucial role in the success of the National Immunization Days (NIDs), requiring the immunization of every child under five years of age over a period of one

to three days, several times a year for several years. The engagement of political leaders also played a key role in the mobilization of financial and human resources outside the health sector. Countries have drawn heavily on ministries of information, transportation and defence, and on the engagement of private sector companies to reach all children during the NIDs.

- Adequate financing: it is estimated that the polio eradication campaign has succeeded in mobilizing a total of more than US\$ 5 billion (about 50% of this as contributions in-kind) over two decades, including a substantial proportion for the strengthening of the routine immunization and surveillance services, thereby contributing to the better delivery of other health services.
- Sufficient human resources: in countries where the formal health system was weakest, it was only possible to achieve the scaling-up of the programme of polio immunization after substantial reinforcement of the health system. Furthermore, given the large number of people required during the NIDs, the success of these campaigns was largely due to the massive number of volunteers who joined the campaign. It is estimated that in 2001 alone about 10 million volunteers and health workers immunized 575 million children.
- Learning from successful examples: in Latin America and the Caribbean, the scaling up benefited greatly from the successful Cuban example and from the strategies and management processes developed by the Pan American Health Organization (PAHO) in its work to achieve the regional elimination of polio.
- Coordinating committees at the international and country level: these

²⁵ WHO. *World Health Report 2003* (Chapter 4).

committees played an important role in sharing information on successful practices and in ensuring that national authorities were always at the centre of key decisions.

These lessons will be very useful in the process of scaling up programmes to achieve the MDGs.

(b) The Global Fund to Fight AIDS, TB and Malaria²⁶

AIDS, TB and malaria are preventable diseases which together account for over 6 million deaths a year and for about 10% of the total global disease burden. The Global Fund was created in 2002 to mobilize energies and substantial funding worldwide for the prevention and treatment of AIDS, TB and malaria. It is an independent organization, governed by an international Board of 18 members, representing donor and recipient governments, NGOs, the private sector (including business and philanthropic organizations) and affected communities.

In its two years in operation, the Global Fund has approved grants for 224 programmes in 121 countries for a total amount of US\$ 2.1 billion, with total disbursements at the end of 2003 amounting to more than US\$ 200 million. The largest share of the funding has been committed to Africa (the continent worst affected) and 60% of overall funding has been allocated for use in efforts to combat HIV/AIDS.

The Global Fund represents a new approach to international health financing. It relies on local ownership and planning to ensure that new resources are directed to programmes on the frontlines of this global effort. Beyond the

Fund's Board and Secretariat, its key structures include the following:

- Country Coordinating Mechanisms composed of the main actors at country level (government agencies, NGOs, community organizations, private-sector institutions, people affected by AIDS, TB and malaria, as well as bilateral and multilateral agencies) responsible for the development and submission of grant proposals to the Global Fund, the monitoring of their implementation and coordination with other donors and domestic programmes.
- An independent Technical Review Panel composed of health and development experts, which provides a rigorous review of the technical merit of applications.
- The Principal Recipient: a local entity nominated by the Country Coordinating Mechanism and the Global Fund to be legally responsible for grant proceeds and implementation of the programme at the country level.
- The Local Fund Agent: an independent local organization hired by the Global Fund Secretariat to assess the Principal Recipient's capacity to administer funds and report on financial and programmatic progress.

(c) The "3 by 5" Initiative²⁷

In 2003, in a renewed response to the HIV/AIDS emergency, another vertical initiative (the "3 by 5" Initiative) was launched by WHO and other partners (UNAIDS, other UN agencies, the Global Fund, governments of affected countries, NGOs and the private sector). This new Initiative aims to ensure that by 2005, 3 million people living with HIV/AIDS in developing countries have access to antiretroviral treatment. This is a huge challenge in itself, even though it will reach

²⁶ Global Fund published data.

²⁷ WHO and Global Fund published data.

less than 10% of the HIV-infected population. However, it is hoped that it will lay the foundations for scaling up the programme after 2005.

(d) Roll Back Malaria Partnership²⁸

The Roll Back Malaria Partnership (RBM) was launched in 1998 by WHO, UNICEF, UNDP and the World Bank to provide a coordinated global approach to fighting malaria. The objective of RBM is to halve the burden of malaria by 2010, thus contributing to the achievement of the MDGs by 2015. The RBM Partnership is made up of several constituencies: malaria-endemic countries, bilateral aid agencies, multilateral development partners, the private sector, NGOs and community-based organizations, research institutions and academia, and foundations. The main activities of RBM in 2003-2004 were the following:

- development of partnership management structures
- development of global consensus on strategies
- efforts to ensure that malaria remains high on the global development agenda
- providing technical and programmatic support to countries.

(e) Global Alliance for Vaccines and Immunization²⁹

According to conservative estimates, every year 33 million children miss out on immunization and at least 1.5 million children under five years old die from vaccine-preventable causes, including 450 000 due to Hib-related pneumonia and meningitis. The Global Alliance for Vaccines and Immunization (GAVI), together with its financial arm, the Vaccine Fund, was created in 1998 as a public-private partnership focused on increasing children's access to vaccines in poor countries. Partners include national governments,

UNICEF, WHO, the World Bank, the Bill & Melinda Gates Foundation, the vaccine industry, public health institutions and NGOs. The Alliance provides a forum for partners to agree upon mutual goals, share strategies and coordinate efforts.

In its five years in operation, GAVI has received about US\$ 1 billion in commitments and vaccinated about 30 million children against hepatitis B, 4.3 million children against *Haemophilus influenzae* type b (Hib), and 1.6 million against yellow fever. In addition, GAVI estimates that countries have been able to provide basic vaccination to 8.3 million children who would not otherwise have been reached with any vaccines. GAVI estimates that about 300 000 deaths have been prevented as a result of the resources provided so far. At present, about 68 countries are receiving support from the Alliance for their health infrastructure, vaccines and supplies, which represents an unprecedented scaling up of the vaccination programmes in these countries.

GAVI is anxious to avoid duplication of efforts and to be country based. This is reflected in its decision-making structure which, beyond its 16-member Board and its Secretariat, includes the following:

- A Working Group composed of managers in the GAVI partner institutions who are responsible for translating the Alliance's priorities into the respective agency work plans.
- GAVI Task Forces (advocacy, financing, implementation, and research and development) which draw upon a wide network of expertise to guide action.
- Regional Working Groups to coordinate and provide technical support to countries.
- National inter-agency coordinating committees (ICCs) to provide a forum for

²⁸ RBM published data (for more information see chapter 9, section 10).

²⁹ GAVI published data.

joint strategy development and monitoring at the country level.

(f) Public-private partnerships for health

Between 1995 and 2003, at least 70 public-private partnerships for health were created (compared to about 12 during the 1980s) in response to the need to bring together interested partners from the public and private sector, when it was recognized that neither sector acting alone could identify and deliver the solution. For a list of these partnerships, see the partnership database on www.ippph.org. In 2000, the Global Forum for Health Research launched the Initiative on Public-Private Partnerships for Health (IPPPH), whose aim is to increase the effectiveness of public-private collaboration, particularly by helping those seeking to develop and improve access to health products to fight neglected diseases in developing countries. A summary of the work of IPPPH and its perspectives for the coming two years appears in chapter 9, section 16.

2. Examples of horizontal approaches

Despite the efforts of all vertical approaches, it is unlikely that the MDGs will be met without major efforts in the use of horizontal approaches as well. These approaches are based on the belief that health is mostly determined by broad factors of a political, economic, social and environmental nature,

and that health improvements therefore depend on developing systems and policies with a broad impact on those factors. It is also believed that, in many ways, acting across the spectrum of diseases and conditions may be more efficient and effective than acting on a disease-by-disease basis. A few examples of horizontal approaches are reviewed below.

(a) Strengthening of health systems: Alma-Ata 1978, People's Health Movement 2000 and WHO 2003

The origin of the health system movement, particularly the "primary health care movement", is to be found in the Alma-Ata Declaration signed by 134 States in September 1978.³⁰ In summary, the main principles underlining the Alma-Ata Declaration are as follows:³¹

- universal accessibility to health services on the basis of need;
- comprehensive health care with an emphasis on disease prevention and health promotion;
- community and individual involvement and self-reliance;
- intersectoral action for health;
- appropriate technology and cost-effectiveness in relation to the available resources for health care.

The 1978 Alma-Ata Declaration was strongly endorsed by the People's Health Assembly at

³⁰ Article I: "A main social target of governments, international organizations and the whole world community in the coming decades should be the attainment by all peoples of the world by the year 2000 of a level of health that will permit them to lead a socially and economically productive life. Primary health care is the key to attaining this target as part of development in the spirit of social justice."

Article VI: "Primary health care is essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination. It forms an integral part both of the country's health system, of which it is the central function and main focus, and of the overall social and economic development of the community. It is the first level of contact of individuals, the family and community with the national health system bringing health care as close as possible to where people live and work, and constitutes the first element of a continuing health care process."

Article VIII: "All governments should formulate national policies, strategies and plans of action to launch and sustain primary health care as part of a comprehensive national health system and in coordination with other sectors. To this end, it will be necessary to exercise political will, to mobilize the country's resources and to use available external resources rationally."

³¹ Sanders D. *Twenty-five years of Primary Health Care: Lessons Learned and Proposals for Revitalization*, School of Public Health, University of Western Cape, South Africa and People's Health Movement, August 2003.

its meeting in Bangladesh in December 2000 and in the ensuing *People's Charter for Health*, which is based on the following principles:

- The attainment of the highest possible level of health and well-being is a fundamental human right, regardless of a person's colour, ethnic background, religion, gender, age, abilities, sexual orientation or class.
- The principles of universal, comprehensive Primary Health Care, envisioned in the 1978 Alma-Ata Declaration, should be the basis for formulating policies related to health. Now more than ever, an equitable, participatory and intersectoral approach to health and health care is needed.
- Governments have a fundamental responsibility to ensure universal access to quality health care, education and other social services according to people's needs, not according to their ability to pay.
- The participation of people and people's organizations is essential to the formulation, implementation and evaluation of all health and social policies and programmes.
- Health is primarily determined by the political, economic, social and physical environment and should, along with equity and sustainable development, be a top priority in local, national and international policy-making.

In the *World Health Report 2003: Shaping the Future*, WHO underlines the importance of strengthening health systems as a key element for achieving the MDGs, pointing out that in the coming years "resolute commitment to the primary health care values of equity, universal access to care, community involvement and intersectoral action will be more important than ever." According to WHO, the renewed focus on health systems and services involves

all areas of WHO work including: the "3 by 5" Initiative to increase the availability of antiretroviral treatment for HIV/AIDS; a newly refocused drive to reduce maternal mortality; and work on chronic diseases and mental health. All of these initiatives contribute to the development of better health care in countries, and all require strong health systems to succeed.

There is broad consensus that in the coming years the much needed strengthening of health care systems will require substantial and determined actions in the following fields:

- governance: leadership, management, incentives, procurement, accountability, motivation;
- human resources: a massive increase in the number and quality of the workforce at all levels, including training in the organizational aspects of health systems;
- at least a doubling of funding for health systems, from both domestic and international sources;³²
- substantial improvements in health systems policies, identifying best practices based on the lessons learned in more than two decades since the Alma-Ata Declaration;
- development of health information systems capable of identifying the most pressing health needs, orienting the programmes towards those needs, and measuring the results of interventions;
- finally, and based on the points above, development of comprehensive health programmes, integrating and linking the health promotion activities involving the health sector, other sectors (education, sanitation, environment, agriculture, etc.), the communities themselves and the macroeconomic policies.

³² In a recent development in November 2003, WHO called on the world donor community to provide a total of US\$ 341 million to help finance health services in 21 countries suffering from a particularly severe crisis. This is part of a United Nations Inter-Agency Consolidated Appeal (CAP) for a total of US\$ 3 billion to support these 21 countries in various sectors.

A number of promising examples are emerging in different countries such as China, Cuba, Sri Lanka and the Indian State of Kerala. In all cases, it appears that the primary condition for success is the political commitment of the authorities and of crucial civil society organizations (CSOs) to the promotion of human capital at the centre of the development process.

(b) Poverty Reduction Strategy Papers

Started in 1999, Poverty Reduction Strategy Papers (PRSPs) are national frameworks for low-income countries wishing to access concessional loans from the World Bank or the International Monetary Fund (IMF), or wishing to benefit from debt relief under the Highly-Indebted Poor Countries (HIPC) initiative.³³ The papers describe macroeconomic, structural and social policies and programmes to promote growth, reduce poverty and make progress in areas such as education and health, indicating domestic and external financing requirements. The Papers are prepared by governments through a participatory process involving civil society and development partners. Most donors have agreed in principle to align their programmes with PRSPs.

As of 2002, 53 countries were at different stages of preparation and implementation of PRSPs, 26 of them having reached the so-called “decision point” under the HIPC initiative, which will translate into debt relief amounting to US\$ 41 billion over time. As a result, it was estimated that health, education and other social expenditures in these countries would increase from 6% of GDP in 1999 to 9% in 2002.

What is the impact of PRSPs on the implementation of the MDGs? According to the UNDP³⁴, PRSPs increasingly mention the MDGs but do not yet provide a systematic review of the policies and financial resources (both domestic and external) needed to achieve them. A similar point is made by Dodd and Hinshelwood³⁵, but it is agreed that we are still in the early years of both the PRSP process and the MDGs and that the PRSPs are potentially a key instrument to reach the MDGs.

(c) Follow-up to the Report of the Commission on Macroeconomics and Health

The Report of the WHO Commission on Macroeconomics and Health in December 2001 was endorsed by the World Health Assembly in May 2002 and the Report's Action Plan was described as “a useful approach to the achievement of the Millennium Development Goals”. The Report recommends that total donor commitments for health should increase from US\$ 7 billion in 2001 to US\$ 27 billion by 2007 and US\$ 38 billion by 2015, while funding from domestic resources in low-income countries should increase from US\$ 50 billion in 2001 to US\$ 73 billion in 2001 and US\$ 90 billion in 2015.³⁶

Following the Report, the effort is now pursued at the country level and two consultations were organized by WHO to address the need to significantly increase investments in health. In the Second Consultation, held in Geneva in October 2003, ministers of health, finance and planning from 40 developing countries came together with representatives from donor countries, international organizations and CSOs. The work at the country level is led by

³³ Dodd R and Hinshelwood E. *Poverty Reduction Strategy Papers: Their Significance for Health*, WHO, 2002.

³⁴ UNDP 2003. op.cit.

³⁵ Dodd and Hinshelwood. op.cit.

³⁶ Commission on Macroeconomics and Health. op.cit. (page 20)

a high-level national commission composed of representatives from different sectors focusing on the following objectives:

- achieve better health for the poor
- increase investments (both domestic and external) in health
- progressively eliminate non-financial constraints.

The ‘macroeconomics and health process’ at the country level includes the following three phases:

Phase 1: promotion of high-level awareness through national workshops with key stakeholders; 24 countries were in phase 1 at the end of 2003.

Phase 2: in-depth assessment of the country health situation and analysis of health infrastructure, including epidemiological surveys, analysis of the capacity of health systems to absorb additional funding, assessment of funding gaps; at the end of phase 2, countries develop multisectoral health investment plans, including high-priority and cost-effective interventions; China, Ethiopia, Ghana, Indonesia, Mexico and Sri Lanka had reached phase 2 at the end of 2003.

Phase 3: implementation of the health investment plan and monitoring of its impact.

In the conclusions of the Second Consultation, the ministers of finance, planning and health drew particular attention to the following points, among others:

- the follow-up to the Report of the Commission on Macroeconomics and Health has helped countries to develop their own political, financial, economic and health strategies, and the process should be continued;
- advocacy for the value of health and its importance to economic growth and poverty alleviation is a core part of the process;

- a multisectoral approach beyond the health sector (taking into account water, sanitation, education and gender issues) is necessary and requires appropriate coordinating mechanisms;
- improved capacity for research and analysis must provide the foundations for the national Health Investment Plans;
- lifting of the human resource constraints is critical for improving the performance of the health system;
- additional investments, from both domestic and external sources, will be required to finance health investments, including strengthening infrastructure and human resources, pursuing health system reforms, and scaling up of essential health interventions;
- the focus has to be on results, emphasizing improved access to health services and better outcomes for the poor.

(d) The “human rights” approach

As each MDG can be linked to economic, social and cultural rights enumerated in the Universal Declaration of Human Rights and other human rights instruments,³⁷ the proponents of this approach argue that the fight for human rights is a direct contribution to the realization of the MDGs. However, the full realization of economic, social and cultural rights goes further than the full implementation of the MDGs. For example, the full realization of the human right to education goes further than achieving universal literacy and primary education, as it requires that people also participate in public decisions. Thus it is argued that achieving the MDGs is part of the realization of human rights, which is the most horizontal and broadest approach to achieving the MDGs.

³⁷ UNDP 2003. op.cit. (page 28)

References to the “human rights” approach appear increasingly in the literature. For example, in an editorial in the *Bulletin of the World Health Organization*³⁸ in 2003, Adetokunbo O. Lucas argued that the code on health rights should make it easy for citizens to assess how well their national health systems are performing.

The human rights approach to achieving the MDGs was presented and discussed at the UNESCO Bergen Consultation of June 2003.³⁹ The Consultation concluded with the following two recommendations to UNESCO:

- To concentrate its work on clarifying the legal and political implications of using the human rights violation framework to achieve poverty abolition, and what this means in terms of legal and political actions.
- To work closely with other bodies and organizations, within and outside the UN system, to minimize duplication of projects.

3. Both horizontal and vertical approaches are needed to reach the MDGs

Proponents of “vertical approaches” argue that emergencies require exceptional actions. The most obvious example is HIV/AIDS. In the words of WHO, “unless the global health community responds now to the need for AIDS treatment in the same way it responds to other emergencies, with exceptional action, the fight against this most powerful enemy will not be won. The days of a ‘business as usual’ approach to AIDS are over.”⁴⁰

Proponents of “horizontal approaches” have just as strong a position, arguing that the fight for better health must be fought on a broad

front through better health services, as the same facilities and personnel are required to care for a whole range of diseases and conditions. They go further by saying that vertical approaches may at times divert resources in favour of one disease and one section of the population at the expense of the other diseases and the rest of the population.

In fact, both approaches are needed to achieve the MDGs, much in the same way that both warp and weft are needed to make a fabric. A joint use of vertical and horizontal approaches will lead to better overall results than either approach alone, provided that “vertical approaches” are used to actually strengthen health services and to support a broad horizontal build-up of the capacities of health systems.⁴¹

A good example is provided by the Haitian model for HIV prevention and care, which can be considered as a vertical approach, but which includes a number of horizontal dimensions as follows:⁴²

- a complete range of prevention services and practices to reduce HIV transmission in all settings;
- improvements in women’s health, including access to family planning and safe childbirth;
- improved TB case-finding and treatment;
- diagnosis and treatment of all sexually transmitted diseases.

The complementarity of vertical and horizontal approaches can be illustrated by the matrix presented in Insert 1.4.

³⁸ *Bulletin of the World Health Organization*, 2003 (81/1).

³⁹ International Social Science Council, Comparative Research Programme on Poverty (CROP), Consultation on *Abolishing Poverty Through the International Human Rights Framework: Towards an Integrated Strategy for the Social and Human Sciences*, Bergen, 5-6 June 2003 (organized by CROP for UNESCO).

⁴⁰ WHO, 2003, op. cit. (page 53)

⁴¹ Ibid. (page 105)

⁴² Ibid. (page 51)

Insert 1.4

Complementarity of vertical and horizontal approaches to health care

	Global Polio Eradication	Global Fund	“3 by 5” Initiative	GAVI	Public-private partnerships	Other vertical approaches
Health systems strengthening						
Poverty Reduction Strategy Papers		Active complementarity between the vertical and horizontal approaches means that each approach consciously feeds its information and experiences into the others, avoids weakening them by taking away their human or financial resources, takes into account their needs and, more generally, makes a conscious effort to situate its activities in the context of the overall needs and functioning of the global health care system.				
Follow-up to Report of the Commission on Macroeconomics and Health						
Human rights approach						

Source: Global Forum for Health Research

For optimal results at the country level, vertical and horizontal programmes must be managed jointly (along the lines illustrated in Insert 1.4) and budget allocations to each programme made on the basis of their

estimated impact on the health of the population, with particular attention to the specific risks inherent in both vertical and horizontal programmes and efforts to maximize their synergies.

Section 5

Role of health research in reaching the MDGs

1. Definition

According to the OECD and UNESCO, research comprises creative work undertaken on a systematic basis in order to increase the stock of knowledge and the use of this knowledge to devise new

applications. Thus health research is the systematic generation of new knowledge in the field of medical, natural, social, economic and behavioural sciences and its use to improve the health of individuals or groups.

Based on this definition and in the view of the Global Forum for Health Research, *health research does not end until people's health is improved in a measurable way.*

2. Research needed to achieve the MDGs

(a) Our present stock of knowledge is insufficient to reach the MDGs or reach them efficiently

As discussed above, in view of our present stock of knowledge in the fields of medical, natural, social, economic and behavioural sciences, foreign aid would have to double and domestic investments in health be increased considerably in order to reach the MDGs by 2015. However, it is possible that – whatever the level of foreign and domestic investments – the MDGs may not be reached at all, or not reached efficiently, due to our insufficient knowledge. In this respect, it is useful to distinguish between two types of gaps in our present knowledge:

- Type 1 gap: the knowledge in the field of medical, natural, social, economic and behavioural sciences exists but is not applied in a systematic, efficient or effective way to reach the MDGs. To fill this type 1 gap, implementation and operational research is needed.
- Type 2 gap: the knowledge in the above-mentioned fields does not exist and new inventions are needed. To fill this type 2 gap, new research is needed.⁴³

In the words of Richard Feachem,⁴⁴ “we will not win the war on poverty, we will not reach the MDGs by 2015, and we will not succeed at the Global Fund in fighting AIDS, TB and malaria without a quantum change in health research, a reorientation of research towards the key health priorities in the world

and towards the critical challenge of implementation – overcoming absorptive constraints to make use of the new resources available to improve global health.”

(b) Opinions expressed by keynote speakers at Forum 7

In her keynote speech at Forum 7 of the Global Forum for Health Research, Nancy Birdsall⁴⁵ drew attention to both type 1 and type 2 gaps in research in the following way: “On the one hand, the successes of the past owe much to tremendous advances in research and new technologies and their relatively widespread deployment, including to the poor, in developing countries. Similarly, future challenges can and will be met in part by the deployment of new biomedical and other technologies. Vaccines against AIDS and malaria would make a huge difference, as have past technological breakthroughs in combating polio and smallpox.

On the other hand, what is striking is that the full benefits of existing technologies are far from being fully realized. Despite the availability of medicines that are seemingly easy and cheap to deliver, high levels of child mortality persist, especially among the poor, and easily preventable chronic diseases are on the rise. In the case of HIV/AIDS, financial constraints have been important but are clearly not the only barrier to making universally available antiretrovirals to manage the disease. In fact, the challenges that bear down on us now reflect in large part our inability to *deploy* more fully and effectively existing technologies, especially in developing countries. The bottom line is that these and any new technologies in the end rely for their

⁴³ In reality, the frontier between the two types of research is often blurred in the continuum between basic, applied, operational and implementation research in the field of medical, natural, social, economic and behavioural sciences.

⁴⁴ Message from Richard Feachem (Chair of the Foundation Council of the Global Forum for Health Research and Executive Director of the Global Fund to Fight AIDS, TB and Malaria) to the participants in Forum 7, Geneva, December 2003.

⁴⁵ Birdsall. *op. cit.*

full exploitation on health systems, i.e. on policies and politics, on people (as providers and consumers), on infrastructure and on the adequate motivating, financing and technical support for all of these soft inputs”.

In the second keynote address delivered at Forum 7, Carlos Morel⁴⁶ emphasized the same points regarding the crucial importance of research (both type 1 and type 2) to reach the MDGs:

“Better use of existing health interventions – e.g. impregnated bednets and drugs for malaria, DOTS for tuberculosis, and condoms and antiretrovirals for HIV/AIDS – are indeed critical for achieving the MDGs. Improving access of afflicted populations to these tools must receive high priority from donors, industry and endemic countries. Equally important, and economically sound, however, is to simultaneously invest in the development of new, improved and equitably affordable interventions. The MDG goals will only be achieved if new tools become available to replace those that will inevitably fail.”

He drew attention to the crucial dilemma of the 1950s over whether to invest in more and better iron lungs to treat the effects of polio or to invest in a polio vaccine to prevent it. The issue was resolved on 12 April 1955, when Salk’s polio vaccine was declared to be safe and effective. A similar dilemma of treatment versus prevention existed in the fight against smallpox prior to the discovery of the smallpox vaccine.

(c) *Research needed to reach the MDGs*

- In relation to MDG 1 concerning poverty

reduction (often seen as the overarching goal), detailed operational research is needed into the risk-taking behaviour of poor populations, preventive actions and the best mechanisms for ensuring access for the poorest sections of the population to health goods and services. In addition, as shown by analytical work carried out by the Global Forum for Health Research,⁴⁷ little is known about the impact of macroeconomic policies on the health of the poor. There is also limited knowledge on the most efficient and effective ways to promote health among the poor through educational or environmental measures. Furthermore, few countries have the information needed to identify the policies and actions with the greatest potential impact on people’s health for the available resources. Health investments are made on the basis of limited information and habit rather than effectiveness in combating poverty, thus sharply decreasing the rates of return which could be obtained from investments in health. To ensure the high rates of return on investments in health mentioned in Section 1 above and in many publications,^{48,49,50} detailed and disaggregated investigations are needed at country level.

- Nutrition research (focusing on maternal and child nutrition, micronutrient deficiencies and environmental factors) is vital to help inform policies and programmes which target poor and vulnerable groups (cf. MDGs 1, 4, 5 and 7).
- There is overwhelming evidence that links attendance and performance in education with both the health status and the wealth

⁴⁶ Morel C. Health and Health Research: Essential Requirements for Achieving the Millennium Development Goals and Economic Development, Paper presented at Forum 7, Geneva, December 2003. Carlos Morel was then Director, UNDP/UNICEF/World Bank/WHO Special Programme for Research and Training in Tropical Diseases (TDR), Geneva.

⁴⁷ Global Forum for Health Research. *The 10/90 Report on Health Research 2001-2002*, Geneva, 2002.

⁴⁸ Commission on Economics and Health. op. cit.

⁴⁹ Brundtland. op. cit.

⁵⁰ World Bank 1993. op.cit. and Onchocerciasis websites at WHO and World Bank.

status of learners and their families. At its most extreme, the impact of ill health on schooling is demonstrated by the HIV/AIDS epidemic in Africa, which is threatening the demand, supply and quality of education.⁵¹ Further research is needed into identifying and ameliorating the health and nutrition, sanitation and environmental factors that limit school attendance and performance if all boys and girls of school age are to be able to complete a full course of primary schooling by 2015 (cf. MDGs 1, 2, 3, 6 and 7).

- While the specific indicators under MDG 3 relate to education, employment and gender representation in parliament, it is well understood that discrimination against women pervades every aspect of society. The disadvantages that women face in each field are compounded by the gendered roles they are assigned and by their poorer health status in most developing countries. Women and girls are the ones most affected by gender aspects of health care (not only in reproductive health but also in their susceptibility to diseases as well as in the diagnosis, treatment and outcomes of diseases).⁵² Research has been undertaken in recent years into the linkages between gender, poverty and health, but much more needs to be learned about how to alter gender biases and achieve equality and empowerment, especially in the most resource-poor settings (cf. MDGs 1, 3, 6 and 7).
- Health research is needed to identify new tools (e.g. drugs, diagnostics, delivery systems, health services, health promotion and disease prevention campaigns – relevant in particular to MDGs 4, 5 and 6) that are appropriate to the economic and social circumstances in the poorest countries and

communities; and to improve knowledge of how best to deliver them and ensure access and their optimum use in local conditions.

- There are major gaps in knowledge about the health impact of changing patterns in the use of land and environmental resources, and a need for research into more effective ways to implement water, sanitation and housing programmes for the poorest sections of society (cf. Goals 1 and 7).
- An essential component of the global partnership for development must be the evolution of better systems for creating global public goods, including in the health field. Recent examples of public-private partnerships for the development of drugs for neglected diseases demonstrate the potential for breaking the logjam in areas such as malaria and TB. The negative consequences of unfair systems of trade and finance on poverty, health and development need to be further delineated. Research into the health impact of policies relating to the Agreement on Trade-Related Intellectual Property Rights (TRIPS), labour mobility and other aspects of globalization will be needed to inform the evolving global partnership (cf. Goals 1, 6 and 8).

Without determined and focused research efforts in the fields indicated above, the vicious circle of poverty and ill health which is targeted by the MDGs will not be broken. This perspective will inform the deliberations at the World Summit on Health Research and the associated annual meeting of the Global Forum for Health Research (Forum 8) which will be held in Mexico on 16-20 November 2004. It will also contribute directly to the evolving programmes of the Global Forum, its initiatives and partners, helping to shape

⁵¹ Matlin SA (ed.). *Commonwealth Education Partnerships 2003*, London, HMSO, 2002.

⁵² Doyal L. *Sex, gender and the 10/90 gap in health research*, Geneva, Global Forum for Health Research, 2002.

priorities for action in the years ahead.

3. Today's dilemma: the 10/90 gap in health research

Although global health research is crucial to efforts to reach the MDGs, it suffers from a severe misallocation of resources in that less than 10% of funding for health research worldwide, by both the public and private sectors, is directed to 90% of the world's health problems. This imbalance in health research funding – known as “the 10/90 gap” – is described in chapter 5.

There are numerous reasons for this imbalance in research funding:

- The failure of the public sector in high-income countries to allocate health research funding on the basis of a systematic analysis of priorities, taking into account both national and international health issues.
- The limited capacity for research in the public sector in many low- and middle-income countries due to limited funding for research in general and lack of appropriate policies and organization.
- The lack of adequate commercial incentives for the private sector in all countries to undertake research on neglected diseases and determinants of disease.

The main consequence of the 10/90 gap in health research is that the vast majority of the world's population, particularly the poor, benefit little, if at all, from health research. More specifically, the consequences can be summarized as follows:

- The state of health of the majority of the world's population is far worse than it would be with the benefits of health research, with direct consequences not only for the individuals and their families, but

for the overall growth and development of their country.

- For the absolute poor (at least 20% of the world's population) who are trapped in the vicious circle of ill health and poverty, the 10/90 gap in health research means that the hope of breaking out of that circle is slimmer than it would otherwise be.
- Finally, for the world as a whole, this results in lower growth and development and increased global insecurity.

4. Proposals to increase financial resources for health research and correct the 10/90 gap

(a) *Proposal by the Commission on Health Research for Development*⁵³

The Commission recommended that governments in developing countries invest 2% of national health expenditures for research and capacity building, and that development agencies earmark at least 5% of their financing in the health sector for the same purposes.

(b) *Proposal by the Commission on Macroeconomics and Health*⁵⁴

To help correct the 10/90 gap, the Commission on Macroeconomics and Health strongly advocated the following measures:

- the creation of a Global Health Research Fund which would channel research funding of about US\$ 1.5 billion per year to research on neglected diseases and the most important risk factors;
- an additional US\$ 1.5 billion per year in health research to be channelled through existing research institutions such as the Special Programmes for Research and Training in Tropical Diseases (TDR) and Reproductive Health (HRP) at WHO, the Global Forum for Health Research and others;

⁵³ Commission on Health Research for Development. *Health Research: Essential Link to Equity in Development*, New York, 1990.

⁵⁴ Commission on Macroeconomics and Health. op. cit. (page 19).

- an additional annual investment of US\$ 1 billion by 2007 and US\$ 2 billion by 2015 in favour of international agencies such as the World Bank and WHO to finance other global public goods such as disease surveillance at the international level, data collection and analysis of global health trends (e.g. burden of disease), analysis and dissemination of international best practices in disease control and health systems.
- capacity strengthening of African institutions through sustained funding for human resources, physical infrastructure, information technologies and networks;
- promotion of research in African countries;
- support for effective linkages between research institutions, health systems and civil society.

(c) Exploration of health research funding options

In a paper presented at Forum 6 in November 2002, Gerald Keusch⁵⁵ explored the pros and cons of various options for international health research funding, including the creation of a common funding pool (such as the Global Health Research Fund proposed by the Commission on Macroeconomics and Health), the creation of a common research network, the creation of a totally new institution, and the creation of a “virtual” international institute of health research.

(d) Discussions under the G8 umbrella

At the G8 meeting of June 2002 in Canada, discussions among the Personal Representatives for Africa of the G8 Member Countries drew attention to the fact that the imbalance between research needs and resources is most pronounced in Africa. They examined the possibility of creating an African health research fund amounting to US\$ 500 million per year to meet the health goals of the New Partnership for African Development (NEPAD) and the health-related MDGs, based on the following strategies:

(e) Criteria for financing mechanisms for health research in developing countries

In a presentation at Forum 7 in December 2003, Andrew Kitua⁵⁶ listed the main criteria which have to be fulfilled in order to reach the “primary objective of any financial support for health research in developing countries, i.e. to enable the target country to develop and achieve adequate capacities for solving its own health problems.” His proposed criteria are the following:

- At the level of engagement: type of commitment made by both the provider and the receiver; capacity building in terms of personnel, infrastructure and equipment; type of partnership; and amount and process of funding.
- At the level of action: involvement of public and private stakeholders; monitoring mechanism; ownership of the implementation process; extent of capacity building; amount of funds actually used in the recipient country.
- At the level of deliverables: evidence of an internal and external evaluation process; evidence of capacity building; new knowledge generated and applied; new partnerships being developed; and transfer of technology.

⁵⁵ Keusch G. Director, Fogarty International Center. Health Research and Development: What issues after the 2001 Commission on Macroeconomics and Health. Paper presented at Forum 6, Arusha, November 2002.

⁵⁶ Kitua A. Director General, National Institute for Medical Research, Tanzania. Challenging Approaches for Financing Health Research in Developing Countries. Paper presented at Forum 7, Geneva, December 2003.

Section 6

Conclusions

The message to ministers of finance can be summarized as follows:

- According to a survey commissioned by the United Nations in preparation of the Millennium Summit in September 2000, citizens from countries around the world overwhelmingly ranked health as their “number one” desire.
- For economies as a whole, the rates of return on investments in health and health research are often a *multiple* of the rates of return on public investments in other sectors of the economy (see for example the rates of return on investments in the fight against smallpox, polio, onchocerciasis, malaria, TB, oral rehydration therapy, pneumonia, measles and HIV prevention). This is not surprising, as the benefits of better health for an economy are enormous and appear in the form of increased production, a more productive labour force, greater competitiveness in the economy, financially more solid enterprises, lower unemployment, increased ability to attract foreign investments, higher tax revenues and a sounder public finance situation, giving the government more resources to finance activities that are in the public interest.
- There is therefore both a strong political and economic interest for governments to invest more in health and health research, as recommended by the Commission on Macroeconomics and Health.
- Fortunately, the concept of development has evolved considerably over recent decades, from a focus on physical capital in the 1960s and 1970s, to a greater focus on human capital in the 1980s and 1990s, and finally to a current focus on efforts to meet the MDGs, which focus entirely on poverty, health, education, the environment and development partnerships. In the first years of the new millennium, a distinction is finally being made between tools (economic growth) and ultimate objectives (human development and human security).
- To reach the MDGs, a large number of so-called “vertical initiatives” (such as the Global Polio Eradication Initiative, the Global Fund, the “3 by 5” Initiative, the RBM Partnership and GAVI) and “horizontal initiatives” (such as the revival of the primary health care movement, PRSPs, the follow-up actions to the Report of the Commission on Macroeconomics and Health, and the human rights movement) have been launched or accelerated. In spite of their multiplicity, which is sometimes confusing to some actors, these developments are extremely positive and illustrate well the shift from physical to human capital in the pursuit of the MDGs. To avoid the risk of duplication and optimize the results of these vertical and horizontal initiatives, it is important that: (a) they be managed jointly at country level with a view to maximizing their synergies and (b) budget allocations to each programme be made on the basis of their estimated impact on people’s health.
- Finally, our present stock of knowledge, both at the global and national levels, is insufficient to reach the MDGs or to reach

them efficiently by 2015. Thus it is crucial for governments to increase their health research budgets to at least 2% of national health expenditures (as recommended by the 1990 Commission on Health Research

for Development) and for donor agencies to increase their contribution to the correction of the 10/90 gap in health research.