

Towards the Summit commitments

Education and undernourishment: the virtuous cycle of feeding bodies and minds

Education has long been acclaimed as one of the most powerful engines for reducing hunger and poverty. And deservedly so. Lack of education undermines productivity, employability and earning capacity, leading directly to poverty and hunger. Every year of schooling increases individual wages by about 10 percent, worldwide. Investments in education have resulted in higher returns than investments in physical capital.

In the rural areas where the vast majority of the world's hungry people live, research shows that a farmer with four years of primary education is, on average, almost 9 percent more productive than a farmer with no education. When combined with the availability of inputs such as fertilizers, new seeds or farm machinery, the productivity increase rises to 13 percent.

It is not only by increasing productivity and incomes that education reduces hunger and malnutrition. Better education for women, in particular, is strongly associated with improvement in their children's nutrition and in family health (see page 16).

The MDGs set the target of ensuring that every child in the world receives a primary school education by the year 2015. But progress towards the goal of universal primary education has been slow and uneven. More than 121 million school-age children remain out of school. Two-thirds of them are girls, and most of them live in rural areas in the regions where hunger and poverty are most widespread.

Among those children who do attend school, one-third drop out before they acquire basic literacy and arithmetic skills. On average, adults have completed only 3.5 years

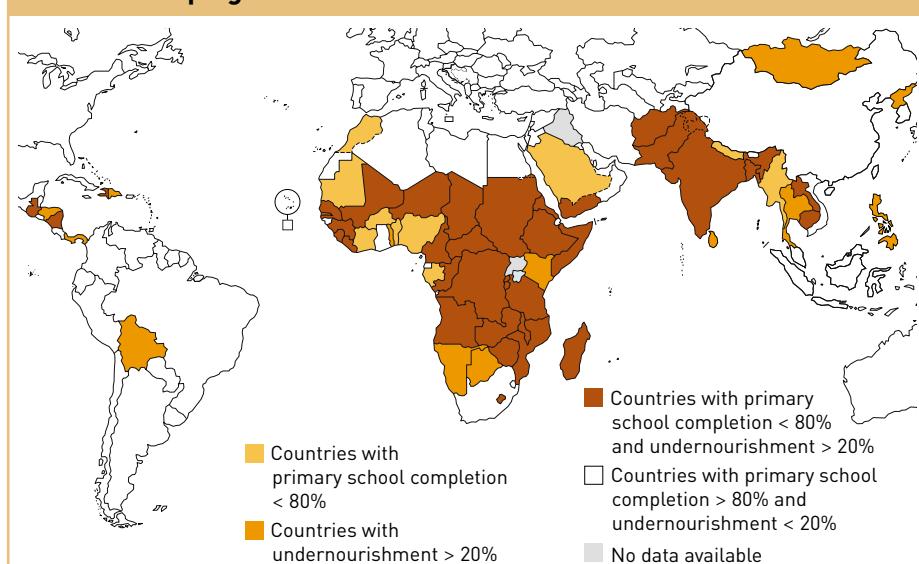
of school in sub-Saharan Africa and only 4.5 years in South Asia. These are also the two subregions where hunger is most prevalent and where progress in reducing it has lagged (see map and graph). To reach the MDG target, the rate at which out-of-school children are being enrolled in schools would have to quadruple. If enrolments in sub-Saharan Africa continue at the

current pace, fewer than half the countries in the region will reach the target (see graphs, facing page).

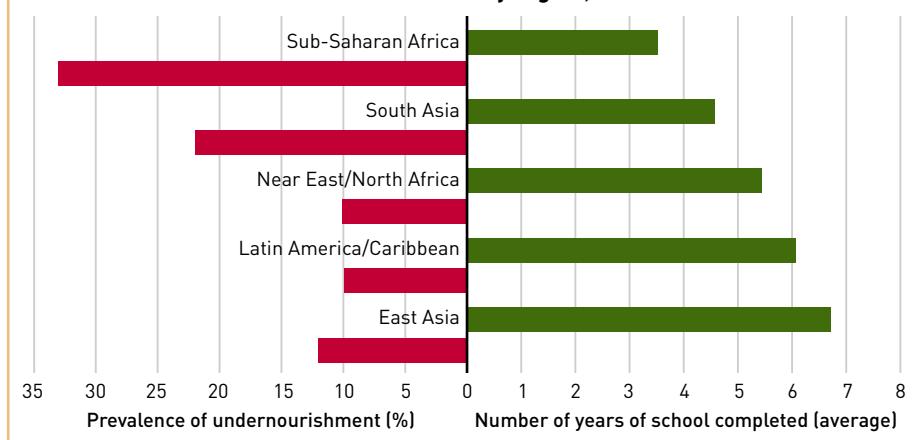
Hunger as an obstacle to education

One reason that the drive for universal primary education has lagged is the persistence of hunger and malnutrition. Just as lack of

Primary school completion and undernourishment in the developing world



School attainment and undernourishment by region, 2000





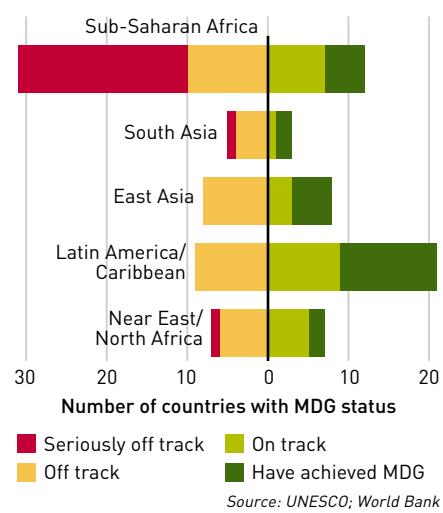
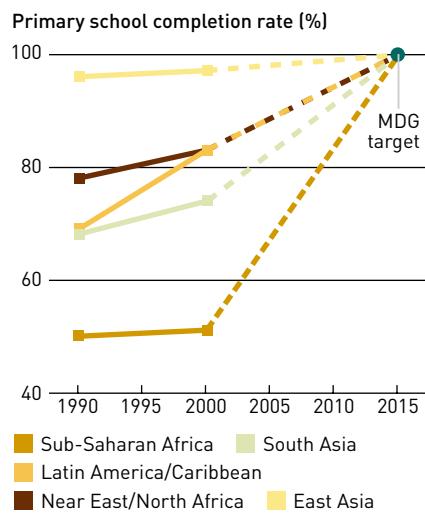
education condemns people to lives of poverty and hunger, hunger and malnutrition deprive millions of children of the opportunity to acquire an education.

Poor, food-insecure families often cannot afford school fees and depend on children, particularly girls, for tasks such as fetching water and fuelwood. Also, poor health and stunting caused by malnutrition often prevent or delay enrolment in school. In a number of countries in Africa and South Asia, more than half of all children from the poorest 40 percent of the population never even enrol in school.

Attendance and completion rates are lowest among rural children, especially girls. In almost half of 41 countries in Africa, Asia and Latin America included in a recent survey, primary school attendance in rural areas fell 20 percentage points or more below attendance in urban areas. The “gender gap” between school attendance and attainment for boys and girls is often two to three times greater in rural areas. In several African countries, primary school completion rates among rural girls fall below 15 percent. Only 1 percent of girls and 1.6 percent of boys in rural Ethiopia complete the eight-year primary education cycle.

Hunger and malnutrition impair children’s performance even when they do attend school. Low birth weight, protein-energy malnutrition, anaemia and iodine deficiency all impair cognitive abilities and reduce children’s ability to learn. Even mild to moderate levels of stunting have been associated with significantly lower mental capacity and school performance. Iron-deficiency anaemia, which affects more than half of all school-age children,

Progress towards universal primary education by region, 1990–2000



Source: UNESCO; World Bank

damages their ability to learn by eroding attention span and memory.

Universal education and the MDGs

Reducing hunger and malnutrition is essential to improving school attendance and children’s learning capacities and performance, especially among rural people, who make up the vast majority of both the unschooled and the hungry.

Likewise, attaining the MDG target for universal education would make a powerful contribution towards achieving the goals for reducing poverty and hunger and would accelerate progress towards other MDGs, such as empowering women and halting the spread of HIV/AIDS. A recent study by the Global Campaign for Education concluded that providing universal primary education could save at least 7 million young people from contracting HIV over a decade. By introducing free primary education

in the mid-1990s, Uganda succeeded not only in doubling school enrolments but also in helping to reverse the tide of HIV/AIDS. With 10 million young people achieving basic literacy and receiving AIDS education in the classroom, HIV prevalence rates fell from 15 percent in 1990 to 4 percent in 2004. Other studies suggest that universal primary education would contribute to improving maternal health, gender equality and natural resource management.

In order to reach the goal, however, developing countries and the international community will need to step up their commitment significantly. The World Bank estimates that spending on primary education in developing countries will have to increase by around US\$35 billion per year in order to eliminate school fees, provide subsidies for the neediest families, build schools, employ more teachers and rehabilitate and upgrade existing systems.

Towards the Summit commitments

Gender equality and the empowerment of women: keys to progress in reducing poverty and hunger

United Nations Secretary-General Kofi Annan has called educating and empowering women "the greatest weapon in the war against poverty". The same could be said of the critical importance of eliminating gender inequality for efforts to reduce hunger and malnutrition.

Research confirms that educated women have healthier families. Their children are better nourished, less likely to die in infancy and more liable to attend school. A recent study of 63 countries concluded that gains in women's education made the single largest contribution to declines in malnutrition during 1970–95, accounting for 43 percent of the total progress.

The entire family also benefits when women are able to work and earn on an equal footing. In the developing world, women commonly use almost all of their income to meet household needs, while men use at least 25 percent for other purposes. A World Bank study in Guatemala found that it takes 15 times as much spending to reduce child malnutrition when income is earned by the father rather than the mother.

But cultural traditions and legal obstacles often prevent women and girls from attending school, holding jobs or accessing resources and services that would allow them to improve their families' livelihoods. In many countries and communities, for example, women are barred by tradition or law from owning land. Although at least 70 percent of the female labour force on the Indian subcontinent is engaged in food production, fewer than 20 percent of women farmers in India and Nepal own land.

Without secure land tenure, women often cannot obtain the credit they would need to make improvements – such as irrigation and drainage systems – that would increase production and maintain the fertility of the soil. In sub-Saharan Africa, where the numbers of women and men farmers are roughly equal, women farmers receive only 10 percent of loans granted to smallholders and less than 1 percent of the total credit advanced to the agriculture sector. Not surprisingly, their households are often the hardest hit by malnutrition and food insecurity.

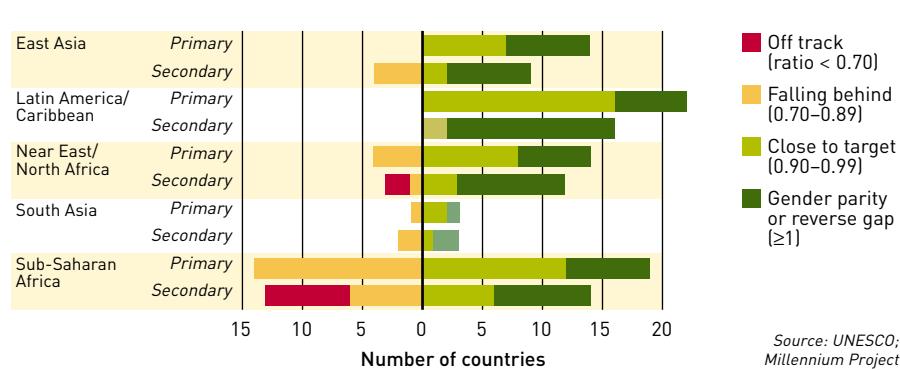
Closing the education "gender gap"

In most of the developing world, school attendance and completion rates for girls fall significantly below those for boys at all levels, from primary school through university. The MDGs set the target of eliminating this "gender gap" in primary and secondary education by 2005 and at all levels by 2015. Although significant progress has been made worldwide, it has not been sufficient to reach the 2005 target and has lagged most notably in countries and regions plagued by widespread and persistent hunger (see graph).

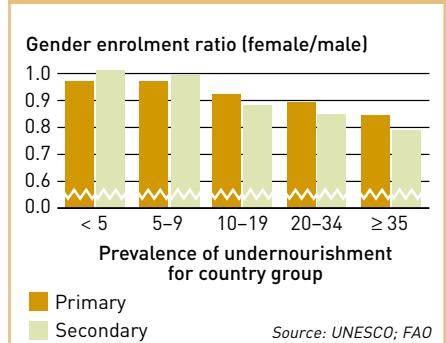
While school attendance and literacy rates for both girls and boys are lowest in sub-Saharan Africa, gender inequalities are greater in South Asia than in any other developing region. Women in the region complete only about half as many years of school as men, and secondary school attendance rates are more than 30 percent lower.

Further analysis reveals that the gender gap is higher where hunger is more prevalent (see graph). Significantly, in these countries, the gap is even greater for secondary

Country predictions by region for progress in closing the gender gap in primary and secondary education by 2005



Gender enrolment ratio by prevalence of undernourishment





school than for primary school. In the countries where the smallest share of the population goes hungry, the opposite is true: school enrolment for girls almost equals that of boys in primary school and surpasses it in secondary school.

This distinct pattern correlates with research suggesting that eliminating the gender gap would accelerate economic growth and reduce undernutrition and child mortality. A recent study supported by the World Bank analysed the impact of failing to achieve gender equality in primary and secondary school in the 45 countries that appear likely to fall short of the MDG target. The study concluded that achieving the goal in these countries could save the lives of more than 1 million children each year and reduce malnutrition rates by several percentage points.

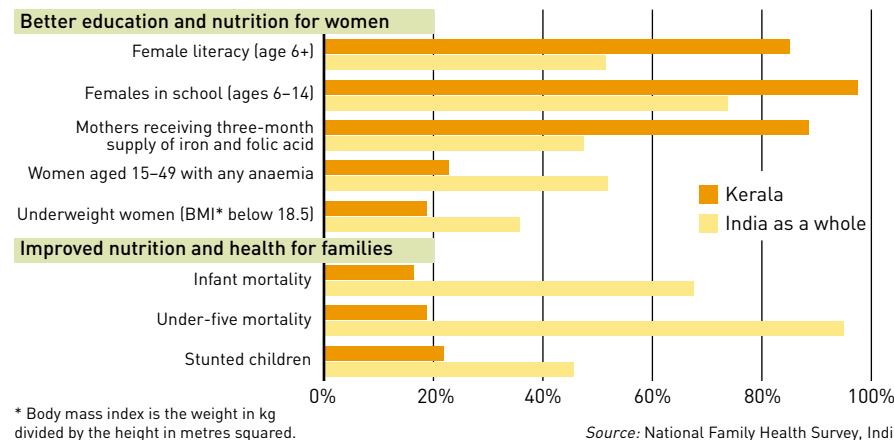
Breaking the cycle of hunger

Poor maternal nutrition and health can be considered the hub of the vicious cycle that passes hunger from one generation to the next – from malnourished mothers to low-birth weight babies who are at high risk of stunting during childhood, of reduced working and earning capacity as adults and of giving birth to low-birth weight babies themselves (see page 21).

Perhaps the main force driving this cycle is inequality between women and men. That was the conclusion of an expert analysis of “the Asian enigma” – the fact that a far higher proportion of children are malnourished in South Asia than in even the poorest countries of sub-Saharan Africa.

A report for the United Nations Children’s Fund (UNICEF) identified three main reasons for the extraordinarily high levels of child

Impact of better education and nutrition for women in Kerala, India



Source: National Family Health Survey, India

malnutrition in South Asia. Two of these – the far higher incidences of low birth weight and of inadequate growth during breastfeeding and transition to solid foods – were traced directly to the fact that extreme gender inequality cuts South Asian women off from education, employment opportunities and participation in making decisions.

As a result, millions of South Asian mothers “have neither the knowledge nor the means nor the freedom to act in their own and their children’s best interests”. And they are far more likely to be severely malnourished themselves. In parts of South Asia, men and boys consume twice as many calories, even though women and girls do much of the heavy work.

“The ‘key of keys’ for breaking this cycle of hunger, the analysis concluded, “is the education of girls”.

Other evidence from South Asia supports this conclusion. In India as a whole, for example, progress in reducing the education gender gap has lagged and barely half of the women can read. For more than

50 years, however, successive governments in the State of Kerala have demonstrated a strong commitment to women’s education. Nearly 90 percent of the state’s female population is literate, and almost every girl under the age of 14 in Kerala attends school.

The impact on family health and welfare is striking. Kerala does not rank among India’s wealthier states in per capita GDP. But it stands head and shoulders above the rest in terms of maternal and child nutrition and health. Rates of anaemia and underweight among women and stunting in children are less than half the national average, and infant and child mortality less than one-quarter (see graph).

The Kerala example suggests that promoting gender equality and empowering women could do more to reduce hunger and malnutrition than any of the other MDGs. It also suggests that addressing the nutritional needs and knowledge of women is essential both to empowering women and to breaking the cycle of hunger.

Towards the Summit commitments

Reducing hunger, saving children's lives

Every year, nearly 11 million children die before they reach their fifth birthday. Almost all of these deaths occur in developing countries, three-quarters of them in sub-Saharan Africa and South Asia, the two regions that also suffer from the highest rates of hunger and malnutrition. That is no coincidence.

Hunger and malnutrition are the underlying cause of more than half of all child deaths, killing nearly 6 million children each year – a figure that is roughly equivalent to the entire preschool population of Japan. Relatively few of these children die of starvation. The vast majority are killed by neonatal disorders and a handful of treatable infectious diseases, including diarrhoea, pneumonia, malaria and measles. Most would not die if their bodies and immune systems had not been weakened by hunger and malnutrition.

Analysis of ten community-based studies of children under the age of

five found that the proportion of deaths that could be attributed to being underweight ranged from 45 percent, in the case of measles, to more than 60 percent, for diarrhoea (see graph). Children who are mildly underweight are about twice as likely to die of infectious diseases as children who are better nourished. For children who are moderately to severely underweight, the risk of death is five to eight times higher.

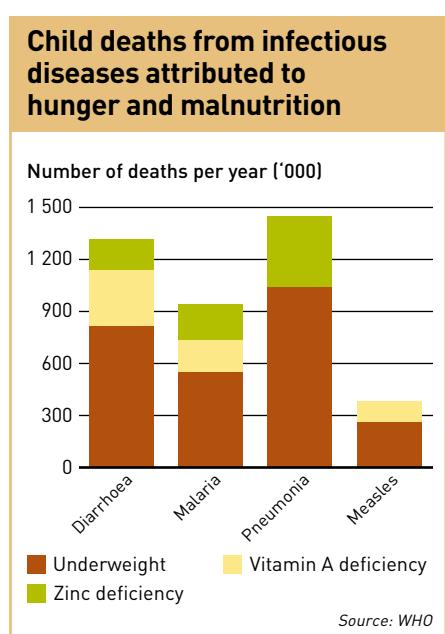
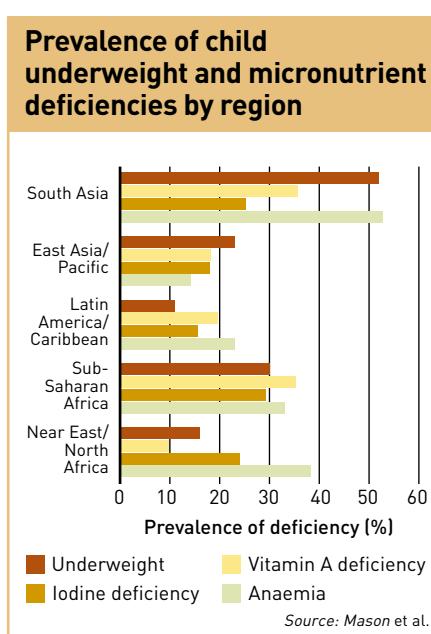
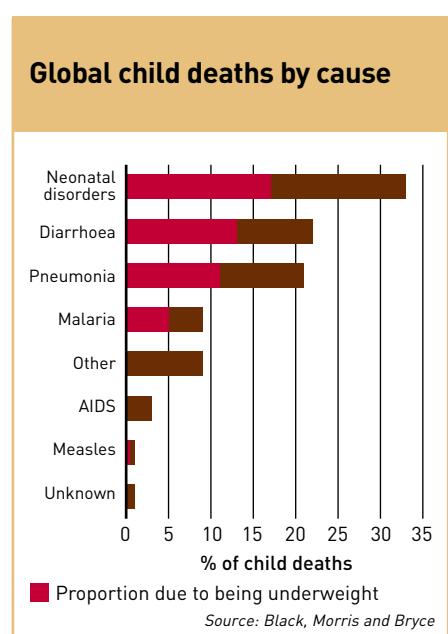
Lack of essential vitamins and minerals also increases the risk of dying from childhood diseases. Vitamin A deficiency, for example, increases the risk of death from diarrhoea, measles and malaria by 20 to 24 percent. For children whose diets lack sufficient zinc, the risk of dying from diarrhoea, pneumonia and malaria is increased by 13 to 21 percent. In many regions of the developing world, more than one-third of all children suffer from deficiencies in these and other micronutrients. Shortages of

vitamin A and zinc alone cause the deaths of more than 1.5 million children each year (see graphs).

Progress towards MDG lagging

The MDGs set a target of reducing the rate of death among children under five by two-thirds between 1990 and 2015. But progress in reducing child mortality has been slowing, not accelerating. Between 1960 and 1990, the number of child deaths fell at a rate of 2.5 percent each year. Since 1990, the baseline year for the MDGs, the pace has slowed to just 1.1 percent. Among developing regions, only Latin America and the Caribbean is currently on pace to reach the MDG target (see graph, facing page).

A study of trends in 59 developing countries found that much of the success in reducing child mortality between 1966 and 1996 could be credited to improved nutrition. Steep reductions in the proportion of underweight children led to a steep





declines in child mortality – 16 percent in Latin America and almost 30 percent in both Asia and the Near East and North Africa.

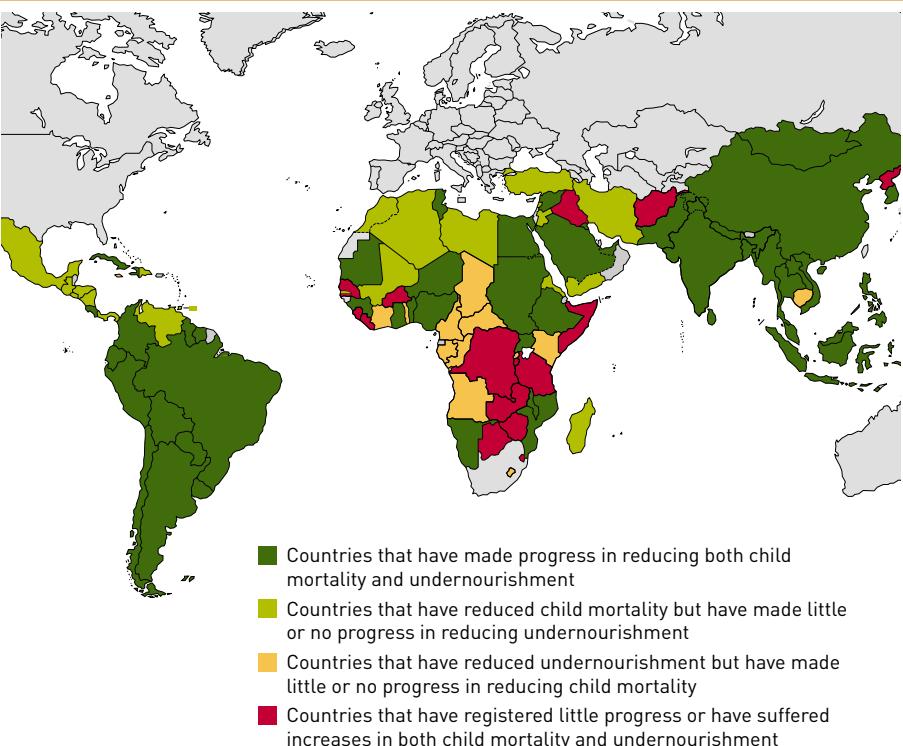
Looking to the future, the study confirmed that one sure way to reduce child mortality would be to make further improvements in child nutrition. Reducing the prevalence of underweight by another five percentage points could reduce child mortality by about 30 percent. Analysis of recent trends confirms that child mortality has fallen fastest in the countries that are making the most rapid progress in reducing hunger (see map and graph).

The World Health Organization and UNICEF have targeted the deadly interaction between malnutrition and treatable childhood diseases as the key to reducing child mortality. Their joint strategy for Integrated Management of Childhood Illness (IMCI) emphasizes the importance of improved diets and feeding practices at home and attention to the risks of hunger and malnutrition when children are brought to clinics for treatment of common childhood ailments.

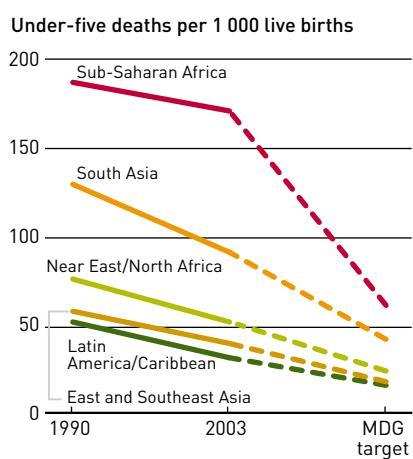
A review of results in the United Republic of Tanzania found significant improvements in children's weights and levels of vitamin A and iron in districts where the IMCI approach had been implemented. Although child mortality had not been reduced as rapidly as expected, it was falling six times faster in IMCI districts than in control districts nearby.

Reaching the MDG target will require a comparable acceleration of progress worldwide, fueled by redoubled efforts to reduce hunger and malnutrition, the most important causes of child deaths.

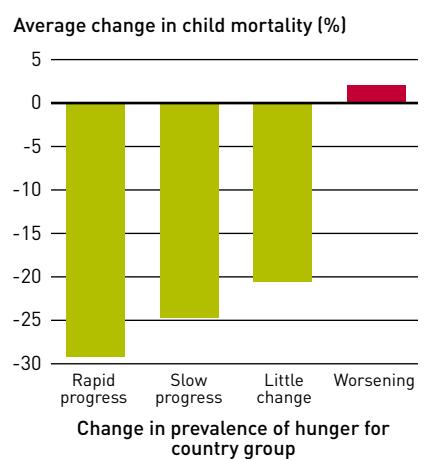
Progress in reducing child mortality and hunger since 1990



Reductions in child mortality and the MDG target by region, 1990–2003



Changes in child mortality for countries grouped by hunger reduction



Towards the Summit commitments

Improving maternal health and breaking the cycle of poverty, hunger and malnutrition

Improving maternal health is key to both saving the lives of more than half a million women each year and breaking the vicious cycle that perpetuates poverty, hunger and malnutrition from one generation to the next.

Every year nearly 530 000 women die as a result of complications from pregnancy and childbirth. Ninety-nine percent of these deaths take place in the developing world, where maternal mortality rates are typically 100 to 200 times higher than in industrialized countries. Almost all of these deaths could be prevented if women in developing countries had access to adequate diets, safe water and sanitation facilities, basic literacy and health services during pregnancy and childbirth.

The MDGs set the target of reducing the maternal mortality rate by 75 percent between 1990 and 2015. With little or no

reliable data available from many countries, estimating progress towards this target has proven difficult. The best available estimates, however, suggest that, globally, levels of maternal mortality remained stable between 1995 and 2000 at a level of around 400 maternal deaths for every 100 000 live births. What is certain is that in most developing regions, maternal mortality rates remain alarmingly high (see graph).

South Asia and sub-Saharan Africa account for more than 85 percent of all maternal deaths worldwide. Maternal mortality ratios in these regions are estimated at 570 and 920 per 100 000 live births, respectively, compared to 20 per 100 000 in developed regions. Unless progress accelerates rapidly in these developing regions, there is little chance of reaching the MDG target.

Malnutrition and maternal death

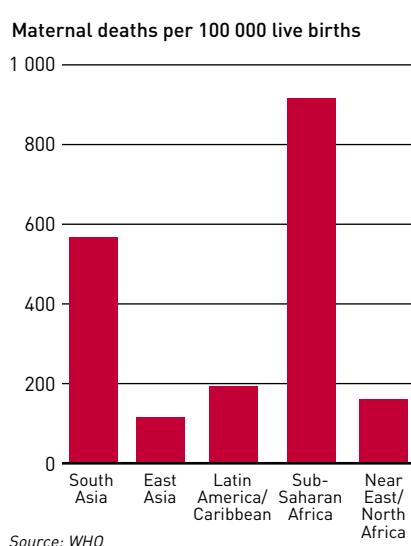
Hunger and malnutrition have been found to increase both the incidence and the fatality rate of the conditions that cause up to 80 percent of maternal deaths (see graph).

Women who are underweight before starting pregnancy and gain too little weight during pregnancy face increased risks of complications and death. That description applies to more than half the pregnant women in India, whose annual toll of 130 000 maternal deaths outstrips any other country by far.

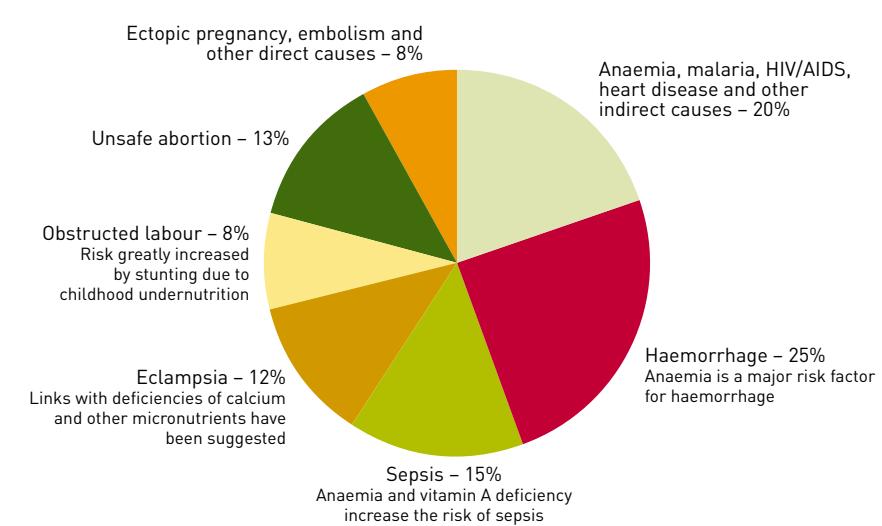
Stunting during childhood leaves women particularly vulnerable to obstructed labour, in which the baby's head is too large to fit through the birth canal. Obstructed labour causes more than 40 000 maternal deaths each year and is far more common in short women.

Anaemia is one of the main indirect causes blamed for

Maternal mortality ratio by region, 2000



Cause of maternal deaths: global estimates





20 percent of maternal deaths and has also been found to heighten the risk of haemorrhage and post-delivery infection (sepsis), which together cause another 40 percent. More than half of all pregnant women in developing countries are anaemic, including more than 80 percent in some parts of South Asia. Iron deficiency is considered the main cause of anaemia among pregnant women.

Other micronutrient deficiencies also threaten the health and lives of mothers and newborn children. Severe vitamin A deficiency has been found to increase vulnerability to sepsis. Iodine deficiency can lead to miscarriages and stillbirths. And lack of dietary calcium appears to increase the risk of high blood pressure and other symptoms of eclampsia.

As might be expected, countries where hunger is widespread also suffer from high rates of maternal mortality (see graph). And maternal

mortality has fallen in at least some countries as they have succeeded in reducing malnutrition.

Thailand provides striking evidence that improving household nutrition can produce a steep decline in maternal mortality. As part of the country's Nutrition Security Compact, village volunteers identify pregnant women and make sure that they receive food supplements to improve overall nutrition, as well as iron and folic acid treatment to combat anaemia. The programme also promotes home gardening and the consumption of fruits and vegetables to improve micronutrient intake. Maternal mortality in Thailand fell from 230 per 100 000 live births in 1992 to 17 in 1996.

Maternal malnutrition and the cycle of hunger and poverty

The damage caused by poor maternal nutrition and health

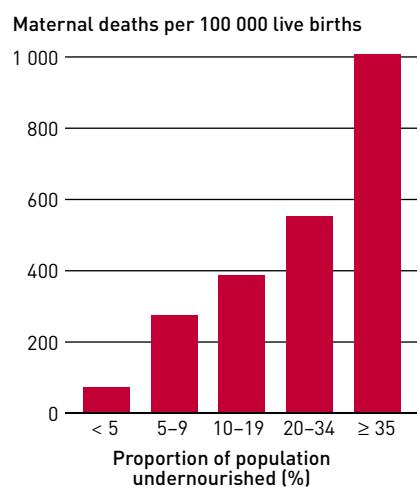
extends far beyond the half a million deaths each year.

Malnourished mothers are far more likely to give birth to low-birth weight babies. So are women whose own growth was stunted by malnutrition during childhood. In some developing countries, more than 30 percent of children are born with low birth weights.

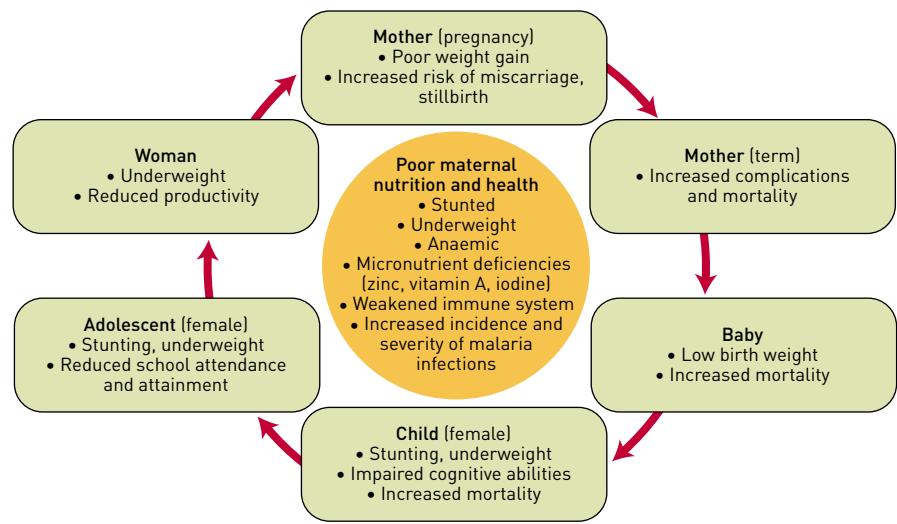
These low-birth weight babies face a greatly increased risk of dying in infancy. They are also far more likely to suffer stunting during childhood that will greatly increase their own risk of dying during childbirth or giving birth to another generation of low-birth weight babies.

And so the cycle of suffering continues (see diagram). Reaching the MDG target for improving maternal health could break the hub around which it revolves. Improving nutrition for women and girls throughout their lives could accelerate progress to bring the MDG target within reach.

Maternal mortality ratio for countries grouped by prevalence of hunger



Maternal health and the cycle of poverty, hunger and malnutrition



Source: FAO

Towards the Summit commitments

Combating HIV/AIDS, malaria and tuberculosis: the role of undernutrition as both symptom and cause

HIV/AIDS, malaria and tuberculosis kill more than 6 million people each year, the vast majority of them in the developing world, and most of them in sub-Saharan Africa. Tens of millions more become infected or fall ill, including more than 5 million newly infected with HIV, 8 million new active cases of tuberculosis and more than 300 million acute malaria attacks. Millions of households are pushed deeper into hunger and poverty by the illness and death of breadwinners and by the costs of health care for the sick, funerals for the dead and support for orphans and other dependents who survive.

The MDGs have set targets for halting and reversing the spread of HIV/AIDS, malaria and tuberculosis. Achieving these targets would save millions of lives and tens of billions of dollars and would significantly slow the vicious cycle of hunger and poverty that has stalled progress towards many of the other MDGs. Conversely, reducing hunger and malnutrition would help halt the spread and roll back the death toll of these diseases.

HIV/AIDS, malaria and tuberculosis are all diseases of hunger and poverty. The overwhelming majority of cases occur in developing countries, especially in sub-Saharan Africa and southern Asia, the two regions that also suffer from the highest rates of undernourishment and extreme poverty (see map and graphs). Within those countries and regions, the hungry and poor are hit the hardest.

Approximately 40 million people are now living with HIV, more than 60 percent of them in sub-Saharan Africa. Each year another 5 million people become infected with HIV and more than 3 million people die of AIDS.

Malaria kills more than 1 million people per year. More than 90 percent of these deaths take place in Africa, mainly among young children. Of the 8 million new active cases of tuberculosis each year, more than 5 million occur in South Asia and sub-Saharan Africa.

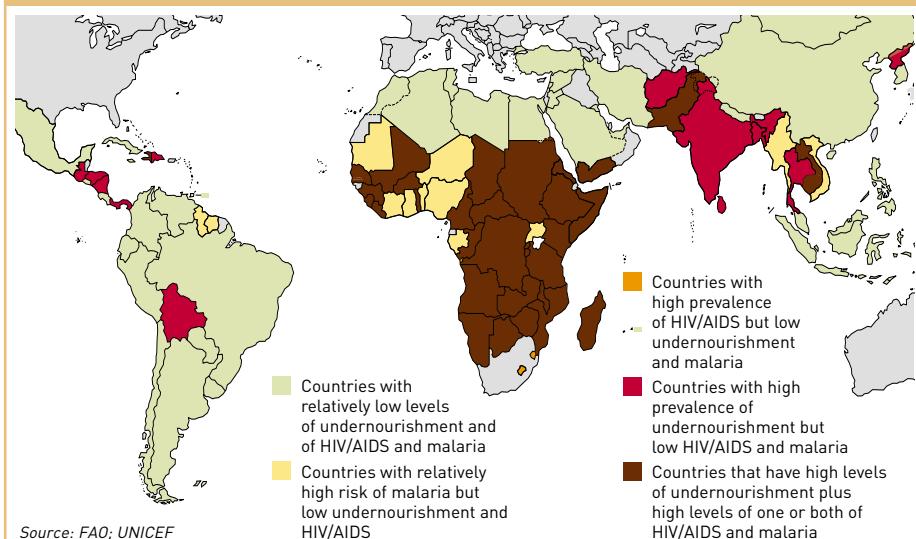
Hunger as a cause of disease

Hunger and malnutrition alter people's behaviour and weaken their

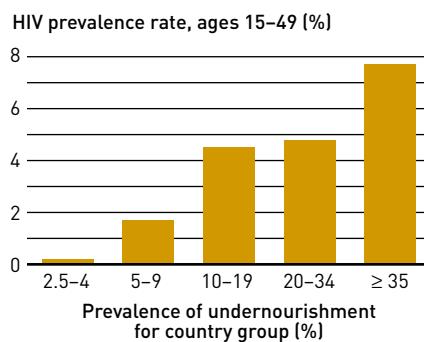
bodies and immune systems, greatly increasing their vulnerability to HIV/AIDS, malaria and tuberculosis.

In the case of HIV/AIDS, hunger and poverty drive men to become migrant labourers, women to turn to prostitution or other dangerous sexual relationships, children to drop out of school. All face greatly increased risk of infection. Recent studies confirm, for example, that young people with little or no education are more than twice as

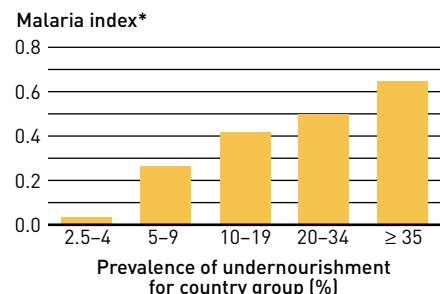
HIV/AIDS, malaria and hunger in the developing world



Hunger and HIV prevalence by country group, 2001



Hunger and malaria risk, 1994



* Fraction of population at risk of malaria multiplied by fraction of malaria cases that are of the variety that causes most deaths and severe illness



likely to contract HIV as those who have completed a primary education (see pages 18–19). Among those who have already been infected with HIV, malnutrition increases vulnerability to opportunistic infections, accelerating the progression of the disease to full-blown AIDS and death.

Hunger and malnutrition also increase the risk of infection and death from malaria and tuberculosis. Severe malaria attacks are more common and more often fatal for children and pregnant women who already suffer from anaemia and other micronutrient deficiencies. Malaria attack rates can be substantially reduced, for example, by increasing vitamin A and zinc through supplements or improved diets.

Tuberculosis spreads quickly among poor people living in crowded conditions, whose immune systems have been weakened by malnutrition. In India, for example, researchers found that tuberculosis rates were twice as high among people who earned less than US\$7 per month as they were among those who earned more than US\$20 per month.

Disease as a cause of hunger

Because they strike at people during their most productive working years, these diseases cause poverty and hunger not only for those who are infected, but also for their families and communities. When aggregated at national and regional levels, the costs are staggering.

In half of the countries in sub-Saharan Africa, per capita economic growth is estimated to be falling by between 0.5 and 1.2 percent each year as a direct result of AIDS. The economic losses from lost productivity are compounded by

soaring costs of medical care and support for orphans. In the countries that have been hardest hit, public health spending related to HIV/AIDS often exceeds 2 percent of GDP. The costs of the pandemic have been estimated at more than US\$25 billion per year and rising fast.

Malaria and tuberculosis also take a heavy toll on productivity, prosperity and food security. Malaria costs Africa an estimated US\$12 billion every year in lost GDP and accounts for between 20 and 50 percent of all hospital admissions in countries where the disease is endemic. Tuberculosis victims who survive their illness typically lose three to four months of work time and 20 to 30 percent of their annual household income.

Relative costs of inertia and action

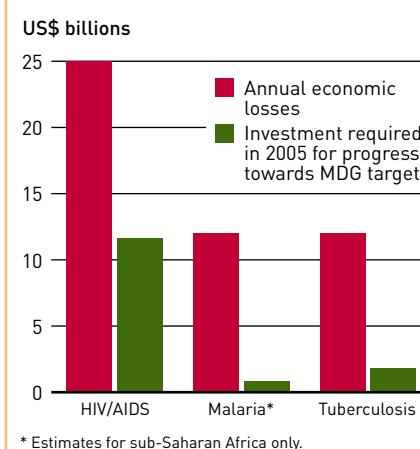
Compared to the human suffering and economic losses caused by these diseases, the investments needed to scale up prevention and treatment to meet the MDG targets

are small (see graph). Less than US\$1 billion per year, for example, would provide insecticide-treated bed nets for 70 percent of the children in Africa, preventive treatment for pregnant women and better first-line treatment for people suffering from malaria attacks.

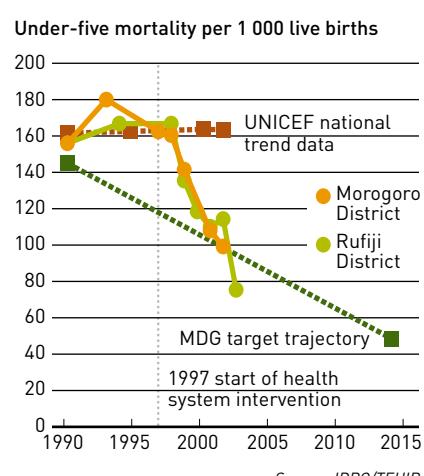
Vitamin A supplements to boost resistance to malaria and other diseases can be supplied for as little as US\$0.10 a year per child.

Given the strong linkages between malnutrition and infectious disease, coordinated and aggressive action to combat both hunger and disease could accelerate the pace and reduce the costs of progress in both areas. A programme in two districts in the United Republic of Tanzania that simultaneously focused on improved child nutrition and distribution of bed nets illustrates the point. Five years after the start of the programme, child mortality in both districts had deviated sharply from the prevailing trend and was on track to reach the MDG target (see graph).

Estimated annual costs of diseases and required actions



Under-five mortality in the United Republic of Tanzania



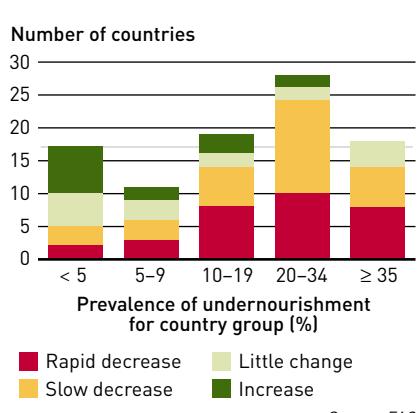
Towards the Summit commitments

Improving environmental sustainability and food security by empowering the rural poor

No segment of humanity depends more directly on environmental resources and services than the rural poor, who make up an estimated 80 percent of the world's 800 million hungry people. They make daily use of soil and water for farming and fishing, of forests for food, fuel and fodder, of the biodiversity of a wide range of plants and animals, both domesticated and wild. Their lives are interwoven with the surrounding environment in ways that make them both particularly valuable as custodians of environmental resources and particularly vulnerable to environmental degradation.

A large proportion of the hungry are concentrated in areas that are highly vulnerable to environmental degradation and climate change, including forests and semi-arid rangelands (see map). When population pressure grows and food is scarce, hunger can drive them to plough under or overgraze fragile rangelands and forest margins, threatening the very resources upon which they depend.

Changes in forest cover, 1990–2000, by undernourishment prevalence group

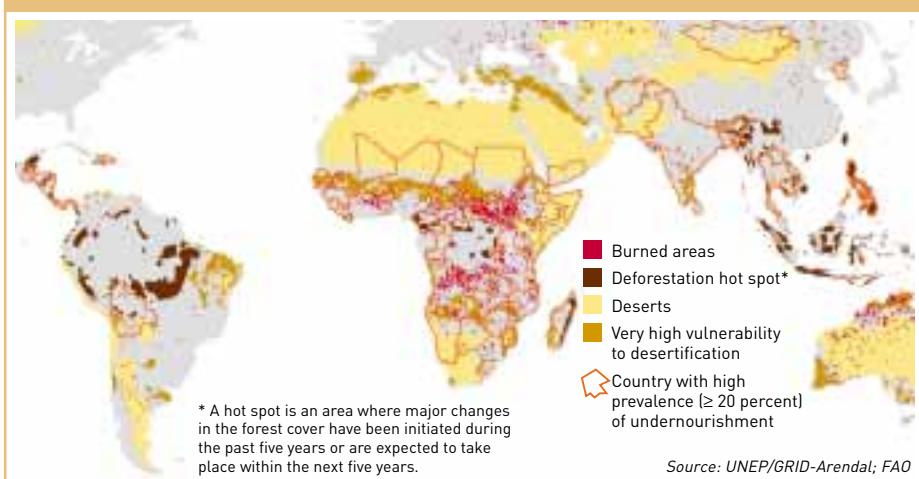


The MDGs established several targets for ensuring environmental sustainability. Key indicators include measures of deforestation and use of solid fuels, as well as access to improved water and sanitation facilities. Progress towards all of these targets would have a direct impact on reducing hunger and malnutrition, as well as improving the environment. But progress has been slow and uneven at best.

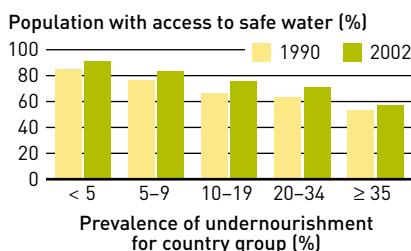
Worldwide, forests were felled and burned during the 1990s at a

rate of 9.4 million hectares a year (an area roughly the size of Portugal). In proportional terms, the most rapid deforestation took place in Africa and the Caribbean and among the countries with the highest prevalence of hunger. The countries where hunger is most prevalent are also marked by the highest reliance on solid fuels, the lowest levels of access to safe water and sanitation and the slowest progress towards the MDG targets (see graphs).

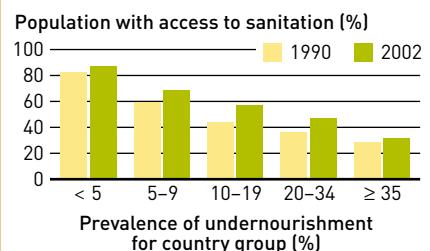
Deforestation, barren lands and undernourishment



Access to improved water and prevalence of undernourishment



Access to improved sanitation and prevalence of undernourishment





Dependency and vulnerability

The activities of poor farmers, herders, forest dwellers and fisherfolk have shaped and conserved much of the rural environment over thousands of years. But they have also contributed to environmental damage, particularly when hunger and population pressure have driven these people to expand fields and herds beyond the carrying capacity of the land. Their multiple roles as sustainable users, sometime despoilers and potential guardians of environmental resources are exemplified by the forests.

Worldwide, an estimated 350 million people depend on forests as their primary source of income and food. Wild plants, animals and other forest foods are important to the diets and food security of an estimated 1 billion people. Forests also provide grazing and fodder for many of the 500 million poor livestock producers whose livelihoods depend on keeping a few animals. Particularly in countries where hunger is widespread, most of the rural poor burn wood gathered from forests and other solid fuels to cook their food (see graph). A study in

six Indian states found that poor people depended on forests and other common lands for around 20 percent of their income, 75 percent of their fuel and 80 percent of grazing for their livestock (see graph).

Because they rely so heavily on forest resources, many of the rural poor have developed techniques for exploiting them sustainably. Small farmers in forested areas, for example, often cultivate crops and raise animals among trees that help capture water, prevent erosion and provide fuel, food and fodder. In rural India, where more than half of domestic energy comes from burning fuelwood, a study found that nearly 90 percent of this wood was obtained by gathering or cutting branches rather than felling trees.

Dependence on forest resources also leaves the rural poor particularly vulnerable to the destruction and degradation of forests. When forests are cleared and converted to other uses and private ownership, poor local residents lose important parts of their incomes and diet and may be forced to travel even greater distances to gather fuel and water, increasing the threats to their food security from polluted water and unsafe food preparation.

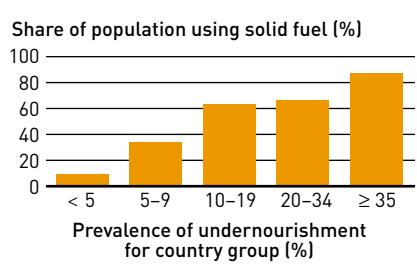
Food security and sustainability

Efforts to promote food security and environmental sustainability can often reinforce each other. All too often, however, ill-conceived policies have favoured large-scale, industrial production of crops and livestock at the expense of mixed farming systems employed by the poor. By devoting large tracts of land to a single use, industrial production often contributes to deforestation, land degradation, contamination of surface and groundwater supplies and loss of biodiversity. Changes in taxation and subsidy policies that make industrial producers responsible for environmental "externalities" can improve both the economic viability and environmental sustainability of small-scale production by the rural poor.

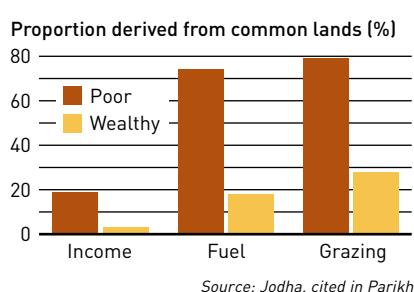
Another promising approach involves recognizing and rewarding the environmental services provided by small farmers and livestock producers. A number of schemes have been devised to compensate farmers for planting trees in and around their fields and pastures to improve carbon sequestration, biodiversity conservation and watershed management. In many cases, the more environmentally friendly techniques may also prove to be more productive. Early results from one project in Latin America suggest that participating livestock producers can raise more animals per hectare while earning payments for planting trees and other plants that remove climate-warming carbon from the atmosphere and enhance biodiversity.

Adopting similar approaches more widely and ensuring that they are targeted to benefit the poor could improve both food security and environmental sustainability.

Solid fuel use in countries grouped by prevalence of undernourishment



Dependence of poor and wealthy in India on common land resources



Towards the Summit commitments

Increased aid and more equitable trade: keys to forging a global partnership for development

The first seven MDGs focus on objectives that must be attained largely through the efforts of the governments and people of developing countries themselves. MDG 8 highlights the responsibility of wealthier industrialized nations to assist those efforts. It calls for increased aid, more equitable trade, relief from the crushing burden of debt and better access to technology, medicines and jobs.

At the International Conference on Financing for Development, convened in Monterrey, Mexico, two years after the Millennium Summit, governments agreed on the framework for a global partnership between developed and developing countries to achieve the MDGs. Within this framework, countries committed themselves "to sound policies, good governance at all levels and the rule of law ... [and] ... to mobilizing domestic resources, attracting international flows, promoting international trade as an engine for development, increasing international financial and technical cooperation for development, sustainable debt financing and external debt relief, and enhancing the coherence and consistency of the international monetary, financial and trading systems".

As tools for increasing financing for development, the Conference focused on the critical importance of external aid for many of the poorest countries and on the role of trade as "the single most important external source of development financing" in many cases.

Reversing the decline in aid

The Monterrey Consensus recognizes that Official Development Assistance (ODA) is "a crucial

instrument for supporting education, health, public infrastructure development, agriculture and rural development, and to enhance food security" for many countries in Africa, least developed countries (LDCs), small island developing states and landlocked developing countries. As part of their commitment to provide additional resources, donor countries vowed to boost ODA to the long-standing target of 0.7 percent of their gross national income (GNI). Although this target had first been proposed by the United Nations General Assembly more than 30 years earlier, aid from the industrialized countries had fallen to an all-time low of 0.22 percent of GNI in 2001 (see graph).

Since the Conference, this downward trend has finally been reversed. G8 members preliminarily agreed in June 2005 to forgive US\$40 billion in debt owed by 18 of the world's poorest countries. Several donors have made specific pledges to raise their development assistance to 0.7 percent of GNI. In May 2005, the European Union detailed plans to reach this goal, announcing specific targets for

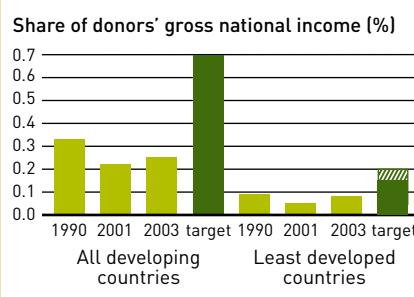
member countries. But several of the world's wealthiest nations have made no such commitments, and the commitments that have been made still must be translated into concrete action targeting the poor.

In addition to increasing the volume of aid, it is also essential to make sure that aid reaches the countries where it is most needed and the sectors where it will have the most impact. That is decidedly not the case today.

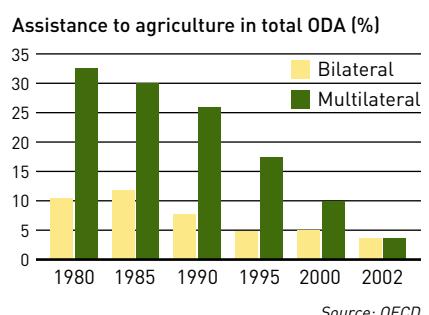
External assistance is critical for very poor countries with limited ability to mobilize domestic private and public savings for investment. And it is particularly critical for agriculture, which is largely bypassed by foreign private investors. Yet at the time of the Monterrey Conference, less than a quarter of ODA went to the 49 LDCs, which are home to more than one-third of the world's hungry people. And both the volume and share of aid directed to agriculture had fallen to less than half the levels of the 1980s (see graph).

It also appears that external assistance to agriculture (EAA) is not related to need. Data on EAA for 1998–2000 indicate that countries

Aid to developing and least developed countries, 1990–2003 and targets



Share of aid to agriculture in total Official Development Assistance



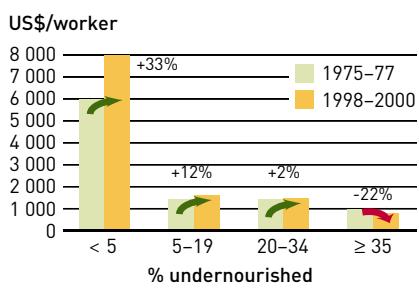


where fewer than 5 percent of the population were undernourished received three times the amount of assistance per agricultural worker that went to countries where more than 35 percent of the population went hungry. In sub-Saharan Africa, where two-thirds of the population depend on agriculture, bilateral aid to agriculture fell by 60 percent in a decade, from US\$1.3 billion in 1990 to US\$524 million in 2001.

The decline in domestic investment and EAA has resulted in a large and growing investment gap between countries where the prevalence of undernourishment is high and those that have managed to reduce hunger. In the group of countries where more than one-third of the people are undernourished, the value of capital stock in primary agriculture per agricultural worker has fallen by almost one-quarter over the past 25 years (see graph).

Since the Monterrey Conference, the share of aid to LDCs in donor GNI has increased to 0.08 percent – a distinct improvement, but well short of the 0.15–0.20 percent target. The level of EAA has remained essentially unchanged.

Capital stock in agriculture by prevalence of undernourishment



More equitable trade

Increasing aid to developing countries would certainly help fuel progress towards the MDGs. Reducing agricultural subsidies and tariffs in developed countries and improving the capacity of LDCs to participate in trade through investments in agricultural productivity, trade-related infrastructure and export industries might help even more.

Every year, wealthier countries hand out more than US\$250 billion in subsidies to agricultural producers. Most of this largesse goes to large farms in the United States of America and Europe, resulting in huge surpluses that are often sold on world markets at less than half their cost of production. Poor developing countries and their consumers gain from the low prices, but their farmers find it difficult, if not impossible, to compete. Exporting countries are also penalized by rich-country tariffs that are often four to five times higher for agricultural products than for manufactured goods.

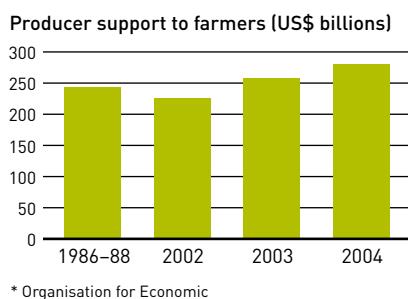
Removing trade barriers and improving infrastructure to increase trade among developing countries could also have a big impact on

improving both incomes and food security. In Africa, for example, local demand for food is expected to outpace growth of export markets over the next 20 years. As the Commission for Africa points out, growing staple foodstuffs for parts of Africa that suffer from regular food shortages could bring growth to the continent's potential breadbaskets, while reducing the need to import more than US\$20 billion worth of food each year.

So far, the MDG 8 call for an open, non-discriminatory trading and financial system has not led to any significant reduction in farm subsidies and tariffs. In fact, producer support to farmers in industrialized countries increased from US\$226 billion in 2002 to US\$280 billion in 2004 (see graph). While a number of initiatives are under way to boost the trading capacity of the poorest countries, support from international financial and development institutions has fallen far short of what is needed. Reversing these trends and scaling up aid to meet the Monterrey commitments are essential to forging an effective partnership for development.

Meeting the aid targets of MDG 8 would substantially contribute to national efforts to meet the rest of the MDGs. Cancelling the debt of poor countries would allow them to stop spending more on servicing debts than they receive as aid, as was the case in 2003. Account must be taken, however, of countries' ability to absorb large additional amounts of aid. Where necessary, this ability must be enhanced through capacity-building. With such assistance, all of these increased flows of resources could be used to step up the investments in rural development, education and health services needed to reach the MDGs.

Farm subsidies in OECD* countries, 1986–2004



Towards the Summit commitments

The way ahead: shifting into forward gear on the twin-track approach to the WFS and MDG goals

At the International Conference on Financing for Development held in Monterrey, Mexico, in 2002, FAO, the International Fund for Agricultural Development (IFAD) and the World Food Programme (WFP) mapped out a practical and affordable “twin-track approach” for combating hunger. Track one: strengthen the productivity and incomes of the hungry and poor, targeting the rural areas where the vast majority of them live and the agriculture sector on which their livelihoods depend. Track two: provide direct access to food and create social safety nets for the hungry.

Since that time, we have seen encouraging signs of revitalized commitment to fight hunger and of an emerging consensus that the twin-track approach provides the core of an effective strategy for waging that fight. The main elements of the approach, for example, were incorporated into the recommendations of the Hunger Task Force of the United Nations Millennium Project.

Building upon the solid foundation of the twin-track approach, at the meeting of the United Nations Economic and Social Council (ECOSOC) that was convened to prepare the World Summit of September 2005, FAO, IFAD and WFP proposed elements of a broader strategy to reach the targets for reducing hunger and poverty specified in MDG 1. If the strategy succeeds in shifting the drive to end hunger into high gear, it will also kick-start more rapid progress towards all the other MDGs.

Twin tracks to the MDGs

Although the twin-track approach was proposed primarily as a way to combat hunger, many of its key elements explicitly target areas where efforts to reduce hunger intersect with achieving the other MDGs (see diagram).

Introducing improved water management, use of green manures, agroforestry and other low-cost, simple technologies, for example, will

enhance not only the productivity and incomes of small farmers, but also their role as custodians of land, water, forests and biodiversity. Similarly, investing in roads, improved water facilities and other rural infrastructure can reduce the lethal impact of water-borne illnesses, improve access to health care and prevent thousands of needless child and maternal deaths, even as it rolls back hunger by opening links to markets where farmers can sell surplus produce and acquire fertilizer and other inputs at reasonable prices.

Measures to provide direct access to food for the neediest families can also contribute to several MDGs simultaneously. Feeding programmes for mothers and infants target the hub of the vicious cycle that perpetuates hunger and malnutrition from one generation to the next, undermining maternal health, stunting children’s physical and cognitive growth, impairing school attendance and performance and impeding progress towards gender equality and the empowerment of women.

A twin-track approach to reach the WFS goal and accelerate progress towards the MDG targets



Source: FAO

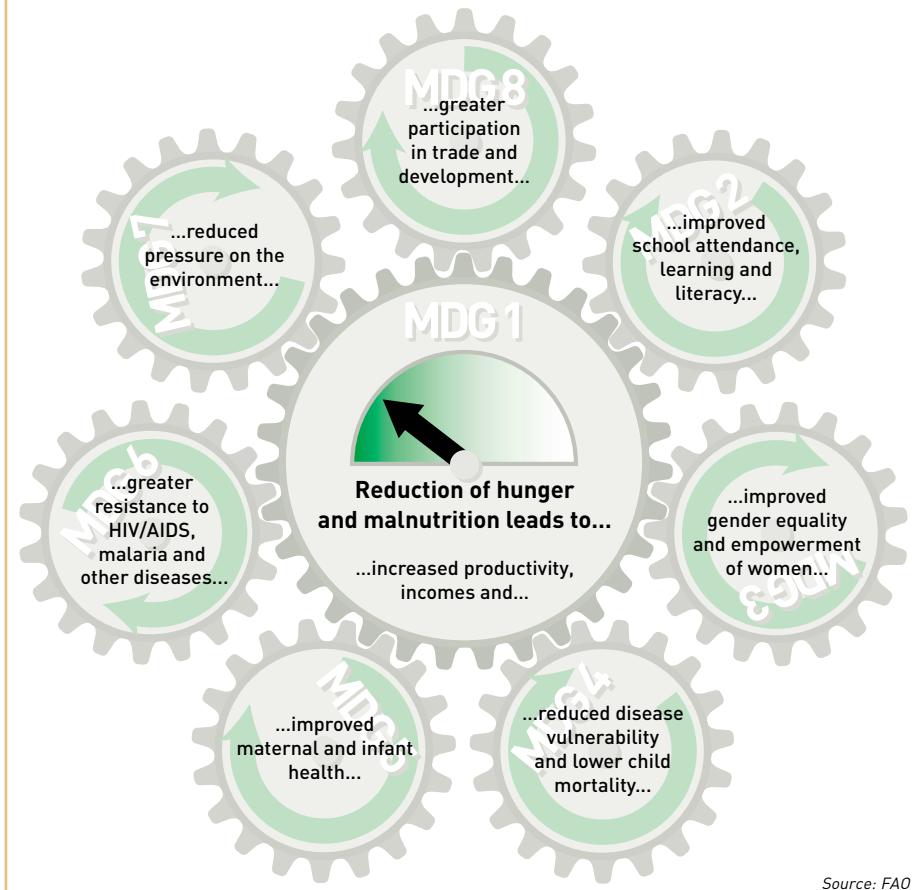


Extending twin-track synergy

As with the twin-track approach itself, the broader strategy for meeting MDG 1 put forward at ECOSOC will also serve to accelerate progress towards the other MDGs. Key elements of the strategy include:

- setting targets, agreeing on coordinated actions in each country and mobilizing resources to exploit synergies among the MDGs;
- using participatory approaches that build local institutions and skills, strengthen legal rights and access to resources, and empower women, indigenous people and other vulnerable groups;
- giving priority to “hot spots” where a high proportion of the population suffer from hunger and extreme poverty and often also from illiteracy, disease, social marginalization and child and maternal mortality;
- using food assistance to develop and enhance skills or to create physical assets, such as food storage facilities or water and erosion control structures, that will help communities weather crises and build the foundation for longer-term development;
- focusing policies and investments on rural areas and agriculture in ways that promote sustainable use of natural resources, improve rural infrastructure, facilitate the function of markets and enhance rural institutions;
- supporting dynamic rural growth by improving the productivity of smallholder agriculture and by diversifying into rural non-farm activities and strengthening microenterprises in which rural women play a major role;
- strengthening poor urban livelihoods with an urban twin-

Shifting into forward gear: eliminating hunger is key to achieving the Millennium Development Goals



Source: FAO

track approach that combines pro-poor employment and asset generation programmes with measures to help the poor meet their basic needs for food, housing, clean water, health and education;

- accelerating progress towards an open and fair international trading system, with special attention to improving market access and reducing export subsidies and trade-distorting domestic support in agriculture.

All of these approaches are proven, practical and affordable. All can be effectively adapted and

applied to meet local requirements, monitored to ensure that they are effective and scaled up as they prove successful and sufficient resources are mobilized.

If developing countries gear up their efforts to revitalize agricultural and rural development and ensure the hungry have access to food, if donor countries fulfil their pledges to increase development assistance substantially, we can still reach the WFS and MDG hunger reduction targets. And in the process, we will shift progress towards all of the other MDGs into high gear as well.