Enriching lives: Overcoming under- and over-nutrition

1 out of 2 deaths among children aged under five in developing countries is associated with under-nutrition

Hunger and malnutrition are intricately bound up with ill-health, poverty and under-development. Freedom from hunger and malnutrition is a basic human right, and their alleviation is a prerequisite for human and national development.

Dietary deficiencies of vitamins and minerals are still responsible for massive mortality and morbidity in developing countries, especially amongst pregnant women and young children:

- Poor nutrition contributes to 1 out of 2 deaths (53%) associated with infectious diseases among children aged under five in developing countries (see graph)
- 1 out of 2 children in Africa with severe malnutrition dies during hospital treatment due to inappropriate care
- 1 out of 4 preschool children suffers from under-nutrition, which can severely affect a child’s mental and physical development
- Under-nutrition among pregnant women in developing countries leads to 1 out of 6 infants being born with low birth weight. This is not only a risk factor for neonatal deaths, but also causes learning disabilities, mental retardation, poor health, blindness and premature death.
- Inappropriate feeding of infants and young children is responsible for one third of the cases of malnutrition
- 1 out of 3 people in developing countries is affected by vitamin and mineral deficiencies and therefore more subject to infection, birth defects and impaired physical and psycho-intellectual development

Percentage distribution of global child deaths by cause (rounded):

- Neonatal
- Acute respiratory infection
- Diarrhoea
- Malaria
- Measles
- HIV/AIDS
- Injuries
- Other & unknown

WHO’s proposed Medium-term Strategic Plan 2008-2013 and the WHO’s two-year Programme Budget 2006-2007 build on WHO’s work over recent bienniums, and set out new and emerging areas of global concern. The latter is implemented through operational plans prepared by country and regional offices and headquarters, which define the results to be achieved and draw up their work plan on the basis of products needed to achieve those results. These work plans form the basis for corporate and coordinated resource mobilization aimed at increasing non-earmarked budgetary support. This global programming note highlights activities which are included in the work plan, but lack critical voluntary resources.
• 40 million people living with HIV/AIDS are exposed to an increased risk of food insecurity and malnutrition, especially in poor settings, which may further aggravate their situation.

The result is a devastating health problem: about 1 billion people, almost all in developing countries, are suffering from the effects of these dietary deficiencies, and another billion are at risk of falling prey to them.

But this is just one side of the problem. Many developing countries are beginning to face a double burden of both under- and over-nutrition in their populations, as at the same time more than 1 billion adults and 22 million children under five are estimated to be overweight. Obesity is an increasing major cause of disability and premature deaths worldwide:

• 2 out of 3 overweight and obese people now live in developing countries, the vast majority in emerging markets and transition economies
• By 2010, more obese people will live in developing countries than in the developed world.

Under- and over-nutrition problems and diet-related chronic diseases account for more than half of the world's diseases and hundreds of millions of dollars of public expenditure. Effective prevention of noncommunicable, chronic diseases should start very early in life and integrated nutrition action focusing on mothers and young children will help to achieve this. A multi-sectoral and multi-stakeholder approach is therefore required to tackle these challenges and ensure that sufficient progress is made towards the Millennium Development Goals.

Nutrition goals and targets

In September 2000, the Member States of the United Nations unanimously adopted the Millennium Declaration, together with the Millennium Development Goals (MDGs), which form the roadmap for its implementation.

The MDGs set quantitative targets for poverty reduction and improvements in health gender equality, environmental and other aspects of human welfare.

The MDG Goal 1 is to eradicate extreme poverty and hunger, and calls for reducing the proportion of people living in less than $1 a day to half the 1990 level by 2015. The first MDG also calls for halving the proportion of people who suffer from hunger between 1990 and 2015. For the MDG purposes, hunger is defined as the proportion of the population below the minimum recommended level of dietary energy consumption (undernourished), and the prevalence of underweight children (undernutrition).

Progress since 1990 in reducing poverty has been good and the 2015 MDG target is likely to be met, if projected growth remains on track.

At current rates of progress, it seems unlikely, however, that the MDG hunger targets will be met. Global leaders agreed to halve the proportion of underweight children under five from 28% in 1990 to 14% in 2015. Ten years later, the target seems very unlikely to be met, as 27% of young children are still underweight. Although the prevalence of underweight children have been falling in most regions, the fall is not sharp enough to achieve the 2015 MDG target for child malnutrition, and in Sub-Saharan Africa rates are rising. Eastern Africa is the subregion experiencing the largest increase in prevalence and numbers of underweight children.

Achieving results

10-step Rapid Action Plan to achieve sustainable results by the end of 2007

Fostering comprehensive and integrated national nutrition policies and programmes
1. Building national capacity to develop intersectoral food and nutrition policies
2. Providing diagnostic reviews and country nutrition profiles
3. Providing knowledge-based nutrition advisory services through practice communities

Achieving MDG Target 2: “Halve, between 2000 and 2015 the proportion of people who suffer from hunger”
4. Promoting optimal fetal growth and development
5. Improving infant and young child feeding practices and care of severely malnourished children
6. Recommending vitamin and mineral requirements for children up to three years
7. Implementing guidelines on food fortification

Promoting healthy diets through the life course and reducing obesity
8. Developing scientific evidence and assessment of obesity and nutrition in transition
9. Establishing nutrition friendly schools

Responding to HIV/AIDS
10. Preventing two-way impact of HIV/AIDS on food security

Of the 126 million underweight children globally, 89 million are now in Asia, 34 million in Africa and 3 million in Latin America and the Caribbean.

The add-on impact of continued high levels of hunger and malnutrition will seriously inhibit the achievement of the MDGs.

Reasons for shortfalls in achieving the nutrition goals

Although poverty, hunger and child under-nutrition are linked, their relationship is a loose one. At the household level, studies have found that that an increase in income produces just 20% of expected increase of energy intake. At the macro-economic level, cross-country comparisons show that in-
creases in GDP produce just 50% of expected improvements in child under-nutrition rates.

The looseness of these relationships has two important implications. Firstly, that nutritional objectives are unlikely to be met through poverty reduction efforts alone. Secondly, for accelerated achievement of child underweight targets, direct programme investments are necessary. It also means that successful efforts to reduce most forms of malnutrition will be very pro-poor, with benefits heavily concentrated among the poor.

Although nutrition professionals from donor and recipient countries broadly agree on key interventions for improving nutritional status and on success factors for implementation, priority donor funding for nutrition activities is rare, as this programme area is largely sidelined in poverty reduction strategies.

WHO’s response

In the light of these changes and trends, WHO will substantially increase its emphasis on nutrition and accelerate programmes and investments to reach the nutrition-related MDGs.

WHO’s vision is to strengthen the ability of governments, civil society and the private sector in developing countries to identify and reduce all forms of malnutrition.

WHO’s immediate objective, between now and December 2007, is to work with partner countries’ institutions and systems to support country-level responses to reduce the prevalence of underweight children under five, and to improve the nutritional status of populations throughout the life course, particularly among pregnant women and young children.

In close partnership with multilateral partners, UN Agencies, private sector, philanthropic, faith-based and civil society organizations, WHO will help 50 partner countries - mainly the least developed countries - in translating national strategies into prioritised, results-oriented, inexpensive operational programmes to achieve sustainable results in the shortest possible time.

To this end, WHO will have a 10-step Rapid Action Plan in place before the end of 2005 and provide technical cooperation services to partner countries aimed at improving the:

- effectiveness of comprehensive and integrated national nutrition policies and programmes
- scaling-up of measures to reach the nutrition-related components of MDG1 to improve child survival (MDG4), and contribute to the attainment of all MDGs
- promotion of healthy diets through the life course and reduction of obesity and diet-related chronic diseases

WHO released new Global Child Growth Standards on 27 April 2006.

• country-led responses to HIV/AIDS to address the two-way impact of HIV/AIDS on food security.

Service line 1: Building national capacity to develop food and nutrition policies

The aim of this service line is to provide training to stakeholders in 50 least developed countries on mainstreaming food and nutrition policies and strategies into national development agendas. This will accelerate progress towards achieving the nutritional goals of the Millennium Development Goals (in particular target 2).

It also aims at developing advocacy tools adapted to local needs to motivate policy makers to take action against under- and over-nutrition, and promote the need to include food and nutrition issues at the core of the national development agenda.

Interventions under this service line include the delivery of WHO/FAO’s training course on The development and implementation of intersectoral food and nutrition plans and policies. This course has been developed and used over the past two years in four regions around the world. The content is targeted at mid-level policy makers and programme managers.

The development of advocacy tools will be focused on providing policy makers with persuasive information on the socio-economic costs of under- and over-nutrition, and on the political salience and cost-effectiveness of nutrition programmes, including those that address obesity and nutrition in transition.

Complementary tools to assist social marketing of micronutrients and micronutrient-rich foods will be made available under WHO’s Global Programme on Diet and Physical Activity.

The expected output is that multi-stakeholders from 50 least developed countries will have received training on development, financing and implementation of national intersectoral food and nutrition plans and policies, and be sensitized to the challenges of changing food systems.

Service line 2: Providing diagnostic reviews and country nutrition profiles

The aim of this service line is to provide diagnostic reviews to governments on the state of nutrition in partner countries. Interventions under this service line include carrying out diagnostic reviews that provide reliable assessments of country systems and procedures. Beyond the immediate feedback they provide on nutrition problems, the diagnostic reviews can make the public aware of any improvements achieved over time and draw the attention of the responsible policy makers and programme managers to the need for additional interventions. A standard set of indicators will be designed and periodically updated by integrating data collected by different agencies.

The output includes an integrated database on nutrition and country nutrition profiles.

Service line 3: Providing knowledge-based advisory services to policy makers and programme managers
through practice communities

The aim of this service line is to foster a learning community and network among policy makers in 100 developing countries who will have an opportunity to access and share knowledge on nutrition.

Interventions under this service line include the establishment of practice communities and infrastructure, group events, network discussions, knowledge-building and community building.

Programme and policy advice should continuously be updated based on the outcome of implemented programmes. This global network of policy makers will share critical areas for programme success, exchange programme schemes and implementation guidelines, and provide support to resource allocation.

The expected output includes helping developing countries benefit from global knowledge on reducing malnutrition.

Service line 4: Optimizing fetal development

The aim of this service line is to promote optimal foetal development. The burden of suboptimal fetal growth and development includes mortality, morbidity and - in later life - health implications in adulthood affecting human capital. Perinatal death represents at least 25% of all deaths under five years of age, and most of these deaths occur in developing countries. Substandard growth and development contribute to infant and child mortality, morbidity, under-nutrition and impaired cognitive development. Maternal nutrition and lifestyle play a major role in pre-pregnancy and pregnancy periods in optimizing fetal development and ensuring the achievement of many of the Millennium Development Goals by 2015.

Interventions under this service line include the development and implementation, with key partners and in targeted countries, of an integrated strategy to promote optimum fetal growth and development.

Service line 5: Improving infant and young child feeding practices and the care of severely malnourished children

The aim of this service line is to provide both preventive care and curative care to improve child survival. This will be achieved through the implementation of the WHO Global strategy on infant and young child feeding and the WHO Severe malnutrition case management guidelines and training package to improve skills and knowledge of hospital-based and community-based physicians and other health workers.

Published and unpublished data indicate that where these WHO guidelines and training modules have been implemented, inpatient malnutrition deaths have fallen dramatically, at least by half, in both resource-rich and poor rich settings.

The WHO training modules are available in English, French, Portuguese, Spanish, as well as various local languages. Partnerships have been established across all regions and more than 700 experts from 38 countries have received training.

Interventions under this service line include support for exclusive breast-feeding and appropriate complementary feeding practices, the revitalization of the Baby-friendly Hospital Initiative and feeding of infants and children in exceptionally difficult circumstances, particularly in HIV/AIDS settings, as well as giving effect to the International Code of Marketing of Breast-milk Substitutes. Also, experts from an additional 30 countries will receive training.

The expected outcome of this service line is strengthened capacity of health workers and improved child survival, as well as a large reduction in child deaths. WHO estimates that reducing child mortality by 30-50% would be achievable over a period of 2-5 years, thereby saving up to 2 million deaths per year.

Service line 6: Recommending vitamin and mineral requirements for children up to three years

The aim of this service line is to forge a consensus among scientists about recommended dietary allowances (RDA) for micronutrients in the age group between six and 36 months, both for children who are on a normal growth path and for children who need to catch-up.

Interventions under this service line include requesting a group of experts to conduct a review of micronutrient RDA and defining RDA for each micronutrient for this age group. Also, guidelines will be provided to ensure adequate micronutrient intake in this age group when it is not possible to satisfy requirements through diet and fortified complementary food, including through supplementation with the various new approaches tested in recent years. Interventions will also focus on establishing when different micronutrient interventions are appropriate and have a health benefit, both in the short- and long-term. Suitable research will also be supported. The conclusions will be presented in a global report.

Service line 7: Implementing guidelines on food fortification

The aim of this service line is to provide guidance for governments, the food industry and civil society in the 50 least developed countries in the design, monitoring and evaluation of food fortification programmes on the basis of WHO guidelines on food fortification with vitamins and minerals.

Interventions under this service line include developing rapid assessment protocols, training starter kits, training trainers for the delivery of national multi-stakeholder workshops, and building national core groups of experts on food fortification with the aim of promoting good nutrition habits among consumers, including buying fortified foods. Case studies will be reviewed and best practice guidelines will be developed.

The expected outputs include an increased ability of policy makers and representatives from the food industry and civil society in the 50 least developed countries to effectively use the WHO guidelines on food fortification with micronutrients.

Service line 8: Developing scientific evidence, assessment and policy guidelines on obesity and nutrition in transition

The aim of this service line is to assist 50 least developed countries as well as 50 emerging markets and economies in transitioning in addressing the obesity problem. Interventions under this service line include guidance on indicators to monitor overweight and obesity in various age groups, enhance access to WHO’s database on dietary patterns, and produce recommendations on nutrition interventions focusing on the reduction of childhood obesity, especially through school-based action.

The expected output includes scientific evidence and assessment and analytical tools to monitor obesity, and operational guidelines to assist partner countries in addressing the dual burden of under- and over-nutrition. Policy advice will be provided, and successful initiatives and programme implementation details will be made available to all countries.

1 Practice communities are groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis.
Service line 9: Establishing nutrition friendly schools

The aim of this service line is to promote adequate nutrition and healthy eating through schools and to prevent school-age child and adolescent malnutrition in all its forms - underweight, micronutrient deficiencies and obesity. A variety of school-based nutrition interventions are already in place and can be entry points for developing a comprehensive school-based nutrition agenda in line with the principles and strategies set forth by WHO’s Global School Health Initiative.

Action under this line includes the development and implementation of a feasible and stimulating mechanism for interconnecting the various school-based nutrition interventions towards a Nutrition Friendly School Initiative.

The expected output includes the production of guidelines and reference materials and the establishment of a network of resource people in the regions to build capacity in countries. Evaluation teams for accreditation of schools as “nutrition friendly” will also be set up. The development of regular reporting mechanisms and management of information, including body mass index data for school age children will also be established.

Service line 10: Ensuring the integration of nutrition into responses for people living with HIV/AIDS

The aim of this service line is to enhance the integration of nutrition into the essential package of care, treatment and support for people living with HIV/AIDS and efforts to prevent infection.

Action under this line includes the development of global recommendations and practical nutrition assessment tools and guidelines for home, community, health facility and emergency programmes. This also includes development and strengthening of human capacity and skills and the incorporation of nutrition indicators into HIV/AIDS monitoring and evaluation plans.

The expected output includes a strengthened political commitment at global, regional and country levels and the development and scaling-up of interventions for improving nutrition in the context of HIV/AIDS.

Financial needs

Poverty reduction and increased food production alone will not solve the nutrition problems facing the poor populations in developing countries.

Now is the time for a concerted effort to increase the achievement of malnutrition MDG targets, which has direct and indirect costs. These costs are unacceptably high, not only in absolute terms but in comparison with costs of a third type - the cost of interventions to prevent malnutrition.

Nutrition programme interventions have consistently been shown to be among the most cost effective.

The World Bank and UN Agencies (FAO, IFAD, UNICEF, WFP and WHO) concerned with the implementation of such programmes are increasingly working more closely together to raise awareness of nutrition problems and mobilize commitment to solve them. WHO is committed to seeing UN Agencies achieve greater collaboration, coherence, efficiency and cost-effectiveness to maximise the impact of their relatively limited development resources for nutrition, including UNICEF’s new Health and Nutrition Strategy (in process)

Within the UN family of agencies, WHO has focused sharply on its comparative advantages in the area of nutrition that enable it to support country-level interventions with a evidence-based potential for high-impact morbidity and mortality reduction.

WHO’s comparative advantage lies in its core functions. It provides Member States and the international community with science-based norms, standards, recommendations and technical guidance, as well as providing operational and political support for building national capacity and identifying best policy options.

WHO wishes to share its efforts with all other UN agencies and act globally to raise awareness and build alliances, networks and partnerships to support its objectives and the achievement of health and adequate nutrition for all, as a fundamental human right.

There is a need to increase the funding of such interventions. WHO is seeking the critical voluntary resources detailed in the table on next page.

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<td>50 LDCs</td>
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**Further information**

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