

Nutrition

Maternal, infant and young child nutrition: draft comprehensive implementation plan

Report by the Secretariat

1. At the 130th session of the Executive Board in January 2012, the draft implementation plan was discussed.¹ In decision EB130(2), *inter alia*, the Director-General was requested to conduct, as soon as possible, further consultations regarding the targets within the existing draft comprehensive implementation plan via a web-based process open to all Member States, as well as multilateral organizations, to provide further guidance in the finalization of the comprehensive implementation plan. This consultation was held 6–27 February 2012.² The draft plan reflects the outcome of the consultation (see Annex).

2. In May 2010, the Health Assembly in resolution WHA63.23 on infant and young child nutrition requested the Director-General “to develop a comprehensive implementation plan on infant and young child nutrition as a critical component of a global multisectoral nutrition framework”. In January 2011, the Executive Board noted the preparatory work on such a plan, making several suggestions on its content, including revising its name to cover maternal nutrition and paying more attention to the double burden of undernutrition and overweight.³ In May 2011 the Health Assembly noted the report on the subject and the revised outline of the plan.⁴

3. In the course of 2011, five regional consultations to collect feedback on the outline of the comprehensive implementation plan were convened in the African Region, the Region of the Americas, and the South-East Asian, Eastern Mediterranean and Western Pacific regions. Altogether, the consultations were attended by representatives of different government sectors (health, agriculture, social welfare, education, trade, finance, environment and industry) from 92 Member States, organizations in the United Nations system, development banks, donors and civil society.

¹ See document EB130/10 and the summary records of the second and ninth meetings in document EB130/2012/REC/2.

² Comments were received by ten Member States and six multilateral organizations. The background paper and the summary of the comments received and the responses provided by the Secretariat are available at http://www.who.int/nutrition/events/2012_consultation_proposed_globaltargets/en/index.html (accessed 21 March 2012).

³ See documents EB128/18 and EB128/2011/REC/2, summary record of the tenth meeting.

⁴ See the summary record of the fourth meeting of Committee B, section 5 of the Sixty-fourth World Health Assembly.

4. The annexed draft implementation plan integrates all comments provided by Member States during meetings of WHO's governing bodies and the regional consultations. It brings together relevant elements from the global strategy for infant and young-child feeding,¹ the Global Strategy on Diet, Physical Activity and Health,² and the action plan for the global strategy for the prevention and control of noncommunicable diseases.³ WHO's framework for priority action for HIV and infant feeding, issued in 2003, has been recently updated to reflect the revised WHO guidelines for the prevention of mother-to-child transmission of HIV.⁴

5. Several related regional strategies and plans have been considered in preparing this draft comprehensive plan: the African Union's Revised African Regional Nutritional Strategy (2005–2015), the Second European Action Plan for Food and Nutrition Policy (2007–2012),⁵ the Strategy and Plan of Action for the Reduction of Chronic Malnutrition,⁶ the Regional strategy on nutrition 2010–2019,⁷ the regional nutrition strategy for South-East Asia⁸ and the Framework for Action on Food Security in the Pacific.⁹

6. The draft comprehensive implementation plan sets out its rationale, namely the fact that, worldwide, nutrition challenges are multifaceted, effective nutrition actions exist but are not expanded sufficiently, and that new initiatives have been launched. The plan defines its objectives and sets five global targets and a time frame. It further proposes a series of five high-priority actions for Member States, the Secretariat and international partners, and lists effective health interventions and non-health activities that affect nutrition as well as indicators for monitoring the implementation of the plan.

New initiatives in nutrition

7. The optimal strategy to ensure rapid improvement of nutrition requires the implementation of a set of specific nutrition interventions and the integration of nutrition into health, agriculture, education, employment, social welfare and development programmes. The Scaling Up Nutrition movement, launched in 2010, has brought together government authorities from countries with high burden of malnutrition and a global coalition of partners. It calls for intensive efforts to scale up nutrition over the period 2013–2015 through such a strategy. Partners in the movement have committed themselves to work together to mobilize resources, provide technical support, perform high-level advocacy and develop innovative partnerships.

¹ Endorsed in 2002 by the Health Assembly in resolution WHA55.25.

² Endorsed in 2004 by the Health Assembly in resolution WHA57.17.

³ Endorsed in 2008 by the Health Assembly in resolution WHA61.14.

⁴ *Antiretroviral drugs for treating pregnant women and preventing HIV infection in infants: recommendations for a public health approach – 2010 version*. Geneva, World Health Organization, 2010; WHO, UNAIDS, UNFPA, UNICEF. *Guidelines on HIV and infant feeding, 2010. Principles and recommendations for infant feeding in the context of HIV and a summary of evidence*. Geneva, World Health Organization, 2010.

⁵ Adopted in 2007 by the Regional Committee for Europe in resolution EUR/RC57/R4.

⁶ Endorsed in 2010 by PAHO's Directing Council in resolution CD50.R11.

⁷ Endorsed in 2010 by the Regional Committee for the Eastern Mediterranean in resolution EM/RC57/R.4.

⁸ Endorsement by Member States of this strategy was urged in 2011 by the Regional Committee for South-East Asia in resolution SEA/RC64/R4.

⁹ The Pacific Islands Forum Secretariat reported the endorsement of the action plan by the Pacific Food Summit 2010 (Port Vila, Vanuatu, 21–23 April 2010), see <http://www.forumsec.org/pages.cfm/newsroom/press-statements/2010/final-outcomes-of-food-summit-1.html> (accessed 27 March 2012).

8. In order to respond to the challenges to successful coordination, organizations in the United Nations system have committed themselves to better align their activities at global level through the reform of the United Nations Standing Committee on Nutrition and at country level through the Renewed Efforts against Child Hunger and Undernutrition (REACH) initiative.

9. The initiative for the elimination of new HIV infections in children and improving the health and survival of HIV-infected mothers¹ supports the improvement of the nutritional state of mothers and their children.

10. At regional level, a successful example of partnership is the Pan American Alliance for Nutrition and Development for the Achievement of the Millennium Development Goals, launched in 2009.

11. The draft comprehensive implementation plan contributes to the global initiatives by identifying global targets and priority actions in the health sector and defining roles for concerned parties. Specific discussions have been organized with this purpose.

IMPLEMENTATION OF THE INTERNATIONAL CODE OF MARKETING OF BREAST-MILK SUBSTITUTES

12. In response to the requirement for biennial reporting,² this report also provides information on progress made by countries in the implementation of the International Code of Marketing of Breast-milk Substitutes. The comprehensive implementation plan also covers this area and proposes future activities.

13. The implementation of the International Code of Marketing of Breast-milk Substitutes, adopted by the Health Assembly in resolution WHA34.22, and of subsequent related Health Assembly resolutions is not consistent among countries. Statutory regulations have been put in place in 103 Member States and have been drafted in nine. Some 37 Member States rely on voluntary compliance by infant formula manufacturers and 25 Member States have not taken action to enforce the Code; information is missing for 20 Member States.³

14. Among the Member States with legislation, most have provisions on the prohibition of promotion of designated products to the general public and health workers and in health-care facilities, as well as provisions on labelling requirements. Fewer Member States have provisions on contamination warnings, and bans on nutrition and health claims.

15. Less than 50% of countries with legal measures also have legal provisions on monitoring implementation of the Code. Only 37 countries have established functioning monitoring and/or enforcement mechanisms, and limited information on the composition, mandate and functions of such mechanisms is available.

¹ *Global plan towards the elimination of new HIV infections among children by 2015 and keeping their mothers alive, 2011–2015*. Geneva, UNAIDS, 2011.

² Article 11.7 of the International Code; information is collected periodically from Member States by questionnaire, the latest surveys of the status of implementation being issued in 2008 and 2010.

³ Information from UNICEF; these countries also include all Member States that reported on Code implementation, as required under Code Articles 11.6 and 11.7. Questionnaires were sent to Member States in 2007 and 2009 and the results were summarized in documents A61/17 Add.1, section F, and A63/9.

16. Information on implementation of the Code is also provided by regional offices, in collaboration with partners in government and the United Nations system. A recent PAHO review on implementation of the Code in the period 1981–2011 indicates that 16 countries have legal measures and six of them regulate the implementation of the law.¹ In 2007 a review by UNICEF of 24 West and Central African countries reported that half those countries had comprehensive legal measures in place.²

17. An analysis by the Secretariat of nutrition policies in Member States in 2010³ highlighted the following challenges: legislation can only be applied in public health facilities, does not provide clear operational guidance, is poorly enforced and inadequately monitored; health workers are not adequately trained; and the public is not adequately informed.

ACTION BY THE HEALTH ASSEMBLY

18. The Health Assembly is invited to endorse the comprehensive implementation plan on maternal, infant and young child nutrition.

¹ 30 años del Código en América Latina: Un recorrido sobre diversas experiencias de aplicación del Código Internacional de Comercialización de Sucedáneos de la Leche Materna en la Región entre 1981 y 2011. Washington DC, PAHO, 2011.

² Sokol E, Aguayo V, Clark D. *Protecting breastfeeding in West and Central Africa: 25 years implementing the International Code of Marketing of Breast-milk Substitutes*. Dakar, UNICEF Regional Office for West and Central Africa, 2007.

³ See http://www.who.int/nutrition/EB128_18_Backgroundpaper1_A_review_of_nutritionpolicies.pdf (accessed 27 March 2012).

ANNEX

**DRAFT COMPREHENSIVE IMPLEMENTATION PLAN ON
MATERNAL, INFANT AND YOUNG CHILD NUTRITION****RATIONALE****Global nutrition challenges are multifaceted**

1. Adequate provision of nutrients, beginning in early stages of life, is crucial to ensure good physical and mental development and long-term health. Poor availability or access to food of adequate nutritional quality or the exposure to conditions that impair absorption and use of nutrients has led to large sections of the world's population being undernourished, having poor vitamin and mineral status or being overweight and obese, with large differences among population groups. These conditions are often present simultaneously and are interconnected.
2. In women, both low body mass index and short stature are highly prevalent in low-income countries, leading to poor fetal development, increased risk of complications in pregnancy, and the need for assisted delivery.¹ In some countries in south-central Asia, more than 10% of women aged 15–49 years are shorter than 145 cm. In sub-Saharan Africa, south-central and south-eastern Asia, more than 20% of women have a body mass index less than 18.5 kg/m² and this figure is as high as 40% in Bangladesh, Eritrea and India. Conversely, an increased proportion of women start pregnancy with a body mass index greater than 30 kg/m,² leading to increased risk of complications in pregnancy and delivery as well as heavier birth weight and increased risk of obesity in children.
3. Iron-deficiency anaemia affects 30% women of reproductive age (468 million), and 42% of pregnant women (56 million). Maternal anaemia is associated with reduced birth weight and increased risk of maternal mortality. Anaemia rates have not improved appreciably over the past two decades.²
4. Every year an estimated 13 million children are born with intrauterine growth restriction³ and about 20 million with low birth weight.⁴ A child born with low birth weight has a greater risk of morbidity and mortality and is also more likely to develop noncommunicable diseases, such as diabetes and hypertension, later in life.
5. In 2010 about 115 million children worldwide were underweight, 55 million had low weight for their height and 171 million under the age of five years had stunted growth.⁵ The proportion of children under the age of five years in developing countries who were underweight is estimated to

¹ Black RE et al. Maternal and Child Undernutrition Study Group. Maternal and child undernutrition: global and regional exposures and health consequences. *Lancet*, 2008; **371**:243-260. Data are also taken from the Monitoring and Evaluation to Assess and Use Results Demographic and Health Surveys (MEASURE DHS) project (<http://www.measuredhs.com/Data/>, accessed 27 March 2012).

² United Nations System Standing Committee on Nutrition. *Progress in nutrition: Sixth report on the world nutrition situation*. Geneva, United Nations System Standing Committee on Nutrition Secretariat, 2010.

³ de Onis M, Blössner M, Villar J. Levels and patterns of intrauterine growth retardation in developing countries. *European Journal of Clinical Nutrition*, 1998; **52**(Suppl.1):S5-S15.

⁴ United Nations Children's Fund and World Health Organization, *Low birthweight: country, regional and global estimates*. New York, United Nations Children's Fund, 2004.

⁵ Underweight and stunting, in: *World Health Statistics 2010*, Geneva, World Health Organization, 2010.

have declined from 29% to 18% between 1990 and 2010, a rate that is still inadequate to meet the Millennium Development Goal 1, Target 1.C of halving levels of underweight between 1990 and 2015. Sufficient decline took place in Asia and Latin America, but considerable efforts are still needed in Africa. In addition, in 2010, 43 million preschool children in developing and developed countries were overweight or obese.¹ The prevalence of childhood obesity in low- and middle-income countries has been accelerating in the past 10 years; WHO estimates that in 2015 the rate will reach 11%, close to the prevalence in upper-middle-income countries (12%). Obese children are likely to grow into obese adults; have an increased risk of type 2 diabetes, liver disease and sleep-associated breathing disorders; and have diminished chances of social and economic performance in adult life.

6. Anaemia affects 47.4% (293 million children) of the preschool-age population,² and 33.3% (190 million) of the preschool-age population globally is deficient in vitamin A.³

7. Nutritional status is also influenced by several environmental factors. In countries where the prevalence of HIV infection is high, HIV infection has both a direct impact on the nutritional status of women and children who are infected and an indirect effect through alterations in household food security and inappropriate choices of infant-feeding practices in order to prevent mother-to-child transmission of HIV. Poor food security also increases risk-taking behaviour by women that places them at increased risk of becoming infected with HIV. Tobacco use (both smoking and smokeless tobacco) during pregnancy adversely affects fetal health. Direct maternal smoking as well as exposure to second-hand smoke during pregnancy increases the risk of complications in pregnancy, including low birth weight and preterm birth. More people are smoking in many low- to middle-income countries, in particular young girls and women of reproductive age. Although the proportion of women smoking is low in many countries, women and their offspring still face substantial risks of adverse pregnancy outcomes because of their exposure to second-hand smoke. Use of tobacco transmits tobacco contaminants to the fetus through the placenta and to neonates through breast milk. Expenditure on tobacco also limits the capacity of families to provide better nutrition for pregnant women and children.

8. Childhood malnutrition is the underlying cause of death in an estimated 35% of all deaths among children under the age of five years. More than two million children die each year as a result of undernutrition before the age of five years and iron-deficiency anaemia is estimated to contribute to a significant number of maternal deaths every year in low- and middle-income countries. Maternal and child undernutrition account for 11% of the global burden of disease.⁴

9. Malnutrition has a negative impact on cognitive development, school performance and productivity. Stunting and iodine and iron deficiencies, combined with inadequate cognitive stimulation, are leading risk factors contributing to the failure of an estimated 200 million children to attain their full development potential. Each 1% increase in adult height is associated with a 4%

¹ de Onis M, Bloessner M, Borghi E. Global prevalence and trends of overweight and obesity among preschool children. *Am J Clin Nutr* 2010;92:1257–64.

² De Benoist B, McLean E, Egli I, Cogswell M (Eds). *Worldwide prevalence of anaemia 1993–2005: WHO global database on anaemia*. Geneva, World Health Organization, 2008, pp.1–40.

³ *Global prevalence of vitamin A deficiency in populations at risk 1995–2005: WHO global database on vitamin A deficiency*. Geneva, World Health Organization, 2009.

⁴ Black RE et al. Maternal and Child Undernutrition Study Group. Maternal and child undernutrition: global and regional exposures and health consequences. *Lancet*. 2008; **371**:243-260.

increase in agricultural wages¹ and eliminating anaemia would lead to an increase of 5% to 17% in adult productivity. Malnutrition is an impediment to the progress towards achieving Millennium Development Goals 1 (Eradicate extreme poverty and hunger), 2 (Achieve universal primary education), 3 (Promote gender equality and empower women), 4 (Reduce child mortality), 5 (Improve maternal health) and 6 (Combat HIV/AIDS, malaria and other diseases).

Effective nutrition actions exist but are not implemented on a sufficiently large scale

10. A review and policy analysis of Member States in 2009–2010² indicated that most countries have a range of policies and programmes on nutrition. However, such policies are often inadequate in face of the complexity of the challenges of maternal, infant and young child nutrition and do not produce the expected impact.

11. Even when nutrition policies exist, they have not always been officially adopted, often do not articulate operational plans and programmes of work with clear goals and targets, timelines and deliverables; they do not specify roles and responsibilities for those involved, or identify workforce and capacity needs; and they do not include process and outcome evaluation.

12. The policy review indicated that correcting maternal undernutrition was not a priority in countries with a high burden of maternal mortality. Few of the 36 countries with the greatest burden of undernutrition implement on a national scale the full set of effective interventions to prevent child underweight and maternal undernutrition and to foster early child development.

13. Interventions that can be managed directly by the health sector lack detailed implementation guidance and are only partially implemented where health systems are weak. Many countries have adopted integrated strategies for maternal, newborn and child health that incorporate nutrition interventions, but the actual delivery of nutrition support in health services is often inadequate and few indicators are available to measure the coverage.

14. National development strategies do not give due consideration to nutrition. National food and nutrition policies often focus on information and informed-choice models and give little attention to structural, fiscal and regulatory actions aimed at changing unfavourable food environments.

15. Programme implementation is not well coordinated among different actors. In all regions most coordination and administration of policies occurred within health ministries, with variable input from ministries of education, agriculture, food and welfare. Policy and programme implementation often depends on external funding and is not sustainable. Monitoring of activities is either not regularly done or is poorly done.

16. The implementation of the International Code of Marketing of Breast-milk Substitutes and subsequent related Health Assembly resolutions is not consistent among countries. Statutory regulations have been put in place in 103 Member States and have been drafted in 9; 37 Member

¹ Haddad L, Bouis HE. *The impact of nutritional status on agricultural productivity: wage evidence from the Philippines*. Warwick (United Kingdom of Great Britain and Northern Ireland), Development Economics Research Centre. Papers, No. 97, 1989.

² See http://www.who.int/nutrition/EB128_18_Backgroundpaper1_A_review_of_nutritionpolicies.pdf (accessed 27 March 2012).

States rely on voluntary compliance by infant formula manufacturers, and 25 Member States have not taken action to enforce the Code; information is missing for 20 Member States.¹

17. In most of those 103 Member States, the legislation makes provisions for the prohibition of promotion of designated products to the general public and health workers and in health-care facilities, and sets labelling requirements. Fewer Member States have provisions on contamination warnings, and bans on nutrition and health claims.

18. Less than 50% of countries with legal measures also have legal provisions on monitoring implementation of the Code. Only 37 of those countries have established functioning monitoring and/or enforcement mechanisms, and limited information on the composition, mandate and functions of such mechanisms is available.

19. Regional offices continue to update the information on implementation of the Code. A recent PAHO review on implementation over the period 1981–2011² indicated that 16 countries have legal measures and six of them regulate the implementation of the relevant law. In a review in 2007, UNICEF found that, of 24 West and Central African countries,³ half had comprehensive legal measures in place.

OBJECTIVE, TARGETS AND TIME FRAME

20. The plan aims to alleviate the double burden of malnutrition in children, starting from the earliest stages of development. Substantial benefits can be obtained by concentrating efforts from conception through the first two years of life, but at the same time a life-course approach needs to be considered so that good nutritional status can be maintained.

21. Progress can be made in the short term, and most nutrition challenges can be resolved within the current generation. For example, currently available nutrition interventions should be able to avert at least one third of the cases of stunting in the short term.⁴ However, full elimination of some conditions may require a longer time frame and commitment for a decade of investment to expand nutrition interventions should be made, with the aim of averting one million child deaths per year. Taking into account the need to align the implementation of the plan to other development frameworks that also consider nutrition, it is proposed that this plan has a 13-year time frame (2012–2025). Reporting will be done biennially until 2022 and the last report will be done in 2025.

22. Global targets are important to identify priority areas and to catalyse global change. Global targets may inspire choices of priorities and ambitions established at country level. They are not meant to dictate the choices of individual countries and regions. Global targets may be used to measure

¹ Information from UNICEF; these countries also include all Member States that reported on implementation of the Code, as required its Articles 11.6 and 11.7. Questionnaires were sent to Member States in 2007 and 2009 and the results were summarized in documents A61/17 Add.1, section F, and A63/9.

² Sokol E, Aguayo V, Clark D. *Protecting breastfeeding in West and Central Africa: 25 years implementing the International Code of Marketing of Breast-milk Substitutes*. Dakar, UNICEF Regional Office for West and Central Africa, 2007.

³ 30 años del Código en América Latina: Un recorrido sobre diversas experiencias de aplicación del Código Internacional de Comercialización de Sucedáneos de la Leche Materna en la Región entre 1981 y 2011. Washington DC, PAHO, 2011.

⁴ Bhutta ZA et al. for the Maternal and Child Undernutrition Study Group. What works? Interventions for maternal and child undernutrition and survival. *Lancet*, 2008, 371:417-440.

achievements and to develop accountability frameworks. Targets are needed for nutrition conditions that are responsible for a large burden of nutrition-related morbidity and mortality from conception through the first two years of life: stunting, maternal anaemia and low birth weight.¹ Child underweight – of which stunting represents the largest fraction – is the largest cause of deaths and disability-adjusted life years in children under the age of five years, and iron deficiency contributes to maternal mortality in low- and middle-income countries. Such targets would complement and underpin Target 1.C of Millennium Development Goal 1 in relation to reducing the prevalence of underweight children. Under that Goal, a fourth target on childhood overweight is warranted, given the rapid increase observed globally in the prevalence of that condition. The proposed targets are based on country experiences and the existence of effective interventions.

23. Global target 1: 40% reduction of the global number of children under five who are stunted by 2025. This target implies a relative reduction of 40% of the number of children stunted by the year 2025, compared to the baseline of 2010. This would translate into a 3.9% relative reduction per year between 2012 and 2025² and implies reducing the number of stunted children from the 171 million in 2010 to approximately 100 million, i.e. approximately 25 million less than what this number would be if current trends are not changed.³ An analysis of 110 countries for which stunting prevalence is available on at least two occasions in the 1995–2010 period⁴ reveals that global stunting is dropping at the rate of 1.8% per year (2.6% in countries with prevalence higher than 30%). In this period 20% of the countries have reduced stunting at a rate of 3.9 % or higher.

24. Global target 2: 50% reduction of anaemia in women of reproductive age by 2025. This target implies a relative reduction of 50% of the number of non-pregnant women of reproductive age (15–49 years) affected by anaemia by the year 2025, compared to a baseline set in the period 1993–2005 and used as a reference starting point. This would translate into a 5.3% relative reduction per year between 2012 and 2025 and implies reducing the number of anaemic non-pregnant women to approximately 230 million. Several countries have demonstrated a reduction in anaemia prevalence in non-pregnant women, as indicated by repeated national surveys reported in the Sixth report on the world nutrition situation of the United Nations Standing Committee on Nutrition:⁵ China from 50% to 19.9% in 21 years (1981–2002); Nepal from 65% to 34% in 8 years (1998–2006); Sri Lanka from 59.8% to 31.9% in 13 years (1988–2001); Cambodia from 56.2% to 44.4% in 6 years (2000–2006); Viet Nam from 40% to 24.3% in 14 years (1987–2001); and Guatemala from 35% to 20.2% in 7 years (1995–2002). These estimates point to a 4% to 8% relative reduction per year.

25. Global target 3: 30% reduction of low birth weight by 2025. The target implies a relative reduction of 40% of the number of infants born with a weight lower than 2500 grams by the year 2025, compared to a baseline set in 2006–2010 and used as a reference starting point. This would translate into a 3.9% relative reduction per year between 2012 and 2025. In Bangladesh and India, where around half the world's children with low birth weight are born, the prevalence of low birth weight decreased, respectively from 30.0% to 21.6% (between 1998 and 2006) and from 30.4% to

¹ The development of global targets has been requested by Member States during regional consultation. Draft targets have been discussed at the regional consultations in the Region of the Americas and the Eastern Mediterranean Region but broader discussion with Member States is required at the Executive Board and through electronic consultation.

² $r = \ln(P1/P2)/t$.

³ de Onis M, Bloessner M, Borghi E. Prevalence and trends of stunting among pre-school children, 1990–2020. *Public Health Nutrition*, 2012, 15:142–148.

⁴ Obtained from 430 data points.

⁵ United Nations Standing Committee on Nutrition. Sixth report on the world nutrition situation. Geneva, 2010.

28.0% (between 1999 and 2005). Reduction in the prevalence of low birth weight has been observed in El Salvador (from 13% to 7% between 1998 and 2003), South Africa (15.1% to 9.9% from 1998 to 2003), and the United Republic of Tanzania (from 13.0% to 9.5% between 1999 and 2005). In these examples, the recorded reductions are in the order of 1% to 12% per year. The higher reduction rates have been observed in countries where a large proportion of the low birth weight is accounted for by intrauterine growth restriction, which is more amenable to reduction than pre-term birth.

26. **Global target 4: No increase in childhood overweight by 2025.** The target implies that the global prevalence of 6.7% (95% confidence interval (CI) 5.6–7.7) estimated for 2010 should not rise to 10.8% (in 2025) as per current trends¹ and that the number of overweight children under five years should not increase from 43 million to approximately 70 million as it could be forecast. The rates of increase are variable in different parts of the world, with more rapid increases in countries that are rapidly expanding their food systems, such as in North Africa. In higher income countries national and regional level information indicate that higher socioeconomic groups have a lower increase in childhood obesity. Lifestyle and environmental interventions used in such circumstances can be used as an example of good practice. In low- and middle-income countries little programmatic experience exists. Programmes aimed at curbing childhood obesity have mainly targeted school age children.² It would also be important to prevent an increase in childhood overweight in countries that are addressing the reduction of stunting.

27. **Global target 5: Increase exclusive breastfeeding rates in the first six months up to at least 50% by 2025.** This target implies that the current global average, estimated to be 37% for the period 2006–2010, should increase to 50% by 2025. This would involve a 2.3% relative increase per year and would lead to approximately 10 million more children being exclusively breastfed until six months of age. Globally, exclusive breastfeeding rates increased from 14% in 1985 to 38% in 1995, but decreased subsequently in most regions. However, rapid and substantial increases in exclusive breastfeeding rates, often exceeding the proposed global target, have been achieved in individual countries in all regions, such as Cambodia (from 12% to 60% between 2000 and 2005), Mali (from 8% to 38% between 1996 and 2006) and Peru (from 33% to 64% between 1992 and 2007).

28. **Global target 6: Reducing and maintaining childhood wasting to less than 5%.** This target implies that the global prevalence of childhood wasting of 8.6% estimated for 2010 should be reduced to less than 5% by 2025 and maintained below such levels.³ In the period 2005–2010, 53 countries reported childhood wasting rates above 5% at least once. Wasting reduction requires the implementation of preventive interventions such as improved access to high-quality foods and to health care; improved nutrition and health knowledge and practices; promotion of exclusive breastfeeding for the first six months and promotion of improved complementary feeding practices for all children aged 6–24 months; and improved water and sanitation systems and hygiene practices to protect children against communicable diseases. Large numbers of children with severe wasting can be treated in their communities without being admitted to a health facility or a therapeutic feeding

¹ de Onis M, Bloessner M, Borghi E. Global prevalence and trends of overweight and obesity among preschool children. *American Journal of Clinical Nutrition*, 2010, 92:1257–1264.

² Population-based prevention strategies for childhood obesity: report of a WHO forum and technical meeting, Geneva, 15–17 December 2009.

³ WHO global and regional trend estimates for child malnutrition, see <http://www.who.int/nutgrowthdb/estimates/en/index.html> (accessed 23 April 2012).

centre.¹ For moderate acute malnutrition, treatment should be based on optimal use of locally available food, complemented when necessary by specially formulated supplementary foods.

ACTIONS

29. This action plan illustrates a series of priority actions that should be jointly implemented by Member States and international partners. Specific regional and country adaptation will be needed, led by the relevant national and regional institutions.

ACTION 1: To create a supportive environment for the implementation of comprehensive food and nutrition policies

30. Progress towards nutrition goals requires high-level policy commitment and broad societal support. Existing food and nutrition policies need to be reviewed so that they comprehensively meet all main nutrition challenges and deal with the distribution of those problems within society. A further aim of such review is to ensure that nutrition is placed centrally in other sectoral policies and in overall development policy. Crucial factors for the successful implementation of these policies are: (a) official adoption by relevant governmental bodies; (b) the establishment of an intersectoral governance mechanism; (c) the engagement of development partners; and (d) the involvement of local communities. The private sector may also contribute to a better food supply and to increased employment and therefore income. Adequate safeguards to prevent potential conflicts of interest should be put in place.

31. Proposed activities for Member States

- (a) revise nutrition policies so that they comprehensively address the double burden of malnutrition with a human rights-based approach and an official endorsement of parliament or government;
- (b) include nutrition in the country's overall development policy, Poverty Reduction Strategy Papers and relevant sectoral strategies;
- (c) establish effective intersectoral governance mechanisms for implementation of nutrition policies at national and local levels that contribute towards policy integration across sectors;
- (d) engage local governments and communities in the design of plans to expand nutrition actions and ensure their integration in existing community programmes;
- (e) establish a dialogue with relevant national and international parties and form alliances and partnerships to expand nutrition actions with the establishment of adequate mechanisms to safeguard against potential conflicts of interest.

¹ Community-based management of severe acute malnutrition. A Joint Statement by the World Health Organization, the World Food Programme, the United Nations System Standing Committee on Nutrition and the United Nations Children's Fund. WHO, Geneva, 2007.

32. Proposed activities for the Secretariat

- (a) provide support to Member States, on request, in strengthening national nutrition policies and strategies, and nutrition components of other sectoral policies including national development policies and Poverty Reduction Strategy Papers;
- (b) improve access to normative and policy guidelines, knowledge products, tools and expert networks.

33. Proposed activities for international partners

- (a) implement global advocacy initiatives that increase public awareness of the need to expand actions on nutrition;
- (b) strengthen international cooperation on nutrition in order to harmonize standards, policies and actions through adequate mechanisms and intergovernmental bodies, such as the World Health Assembly, the Committee on World Food Security and the United Nations Economic and Social Council;
- (c) engage in international coordination mechanisms or partnerships, including the Scaling Up Nutrition movement and the United Nations System Standing Committee on Nutrition.

ACTION 2: To include all required effective health interventions with an impact on nutrition in national nutrition plans

34. Many diverse interventions aimed at changing behaviours, providing nutritional support and reducing the exposure to several environmental risk factors have been shown to be effective and should be considered for implementation at national scale. Tables 1a and 1b list effective direct nutrition interventions and health interventions that have an impact on nutrition and that can be delivered by the health system. The lists include interventions that need to be considered either for selected population groups or in special circumstances, including emergencies. Analysis of the evidence is summarized in a background paper to this plan¹ and reported in the WHO e-Library of Evidence for Nutrition Actions². WHO's guideline process ensures that evidence is continuously updated and that gaps in research are identified. Such interventions are intended as options that could be implemented on the basis of country needs.

35. The greatest benefits result from improving nutrition in the early stages of life. However, a life-course approach to improving nutrition is also needed, with activities targeting older children and adolescents besides infants and young children, in order to ensure the best possible environment for mothers before conception so as to reduce the incidence of low birth weight and to break the

¹ *Essential nutrition actions. Improving maternal-newborn-infant and young child health and nutrition.* Geneva, World Health Organization, 2011.

² <http://www.who.int/elena/en/> (accessed 27 March 2012).

intergenerational cycle of malnutrition. Management of childhood overweight would also require action throughout the school years.¹

36. Interventions should be integrated into existing health-care systems to the extent possible. They should be linked to existing programmes and delivered as packages, in order to improve cost efficiency. Implementation of WHO's approaches and interventions – Integrated Management of Childhood Illness, Integrated Management of Adolescent and Adult Illness and Integrated Management of Pregnancy and Childbirth – will be essential. Furthermore, strengthening health systems forms a central element of a successful nutrition strategy.

37. The design of packages of intervention can be based on country needs and the level of investment. Community-based programmes that integrate different direct nutrition interventions in primary care, with systems to ensure universal access, should be prioritized as being cost-effective. A group of organizations in the United Nations system has jointly produced the United Nations OneHealth Costing Tool – software that can easily be adapted to different country contexts.²

38. Proposed activities for Member States

- (a) include all proven nutrition interventions relevant for the country in maternal, child and adolescent health services and ensure universal access;
- (b) reflect the Global Strategy on Infant and Young Child Nutrition, the Global Strategy on Diet and Physical Activity and the WHO nutrition guidelines in national policies;
- (c) strengthen health systems, promote universal coverage and principles of primary health care;
- (d) develop or where necessary strengthen legislative, regulatory and/or other effective measures to control the marketing of breast-milk substitutes in order to ensure implementation of the International Code of Marketing of Breast-milk Substitutes and relevant resolutions adopted by the Health Assembly;
- (e) engage in vigorous campaigns to promote breastfeeding at the local level.

39. Proposed activities for the Secretariat

- (a) review, update and expand WHO's guidance on and tools for effective nutrition actions, highlight good practice of delivery mechanisms and disseminate the information;
- (b) apply cost-effectiveness analysis to health interventions with an impact on nutrition;
- (c) provide support to Member States, on request, in implementing policies and programmes aimed at improving nutritional outcomes;

¹ *Population-based prevention strategies for childhood obesity: report of a WHO forum and technical meeting, Geneva, 15–17 December 2009*. Geneva, World Health Organization, 2010.

² http://www.internationalhealthpartnership.net/CMS_files/userfiles/OneHealth%20leaflet%20May2011.pdf (accessed 27 March 2012).

(d) provide support to Member States, on request, in their efforts to develop or where necessary strengthen and monitor legislative, regulatory and other effective measures to control marketing of breast-milk substitutes;

(e) convene a meeting with academic partners to develop a prioritized research agenda.

40. **Proposed activities for international partners**

(a) align plans for development assistance to nutrition actions recognized as effective;

(b) support the nutrition components of health strategies for maternal and child health, such as the Integrated Maternal Newborn and Child Health Strategy.

ACTION 3: To stimulate development policies and programmes outside the health sector that recognize and include nutrition

41. Sectoral development strategies that are sensitive to issues of nutrition are needed in order to reduce the double burden of undernutrition and overweight; these should aim to promote the demand for and supply of healthier food and to eliminate constraints to its access and to use of healthier food. Many sectors should be engaged, but mainly agriculture, food processing, trade, social protection, education, labour and public information. Cross-cutting issues such as gender equality, quality of governance and institutions, and peace and security should also be considered. These matters could be considered in the development and implementation of a framework akin to the WHO Framework Convention on Tobacco Control, which has provided substantial impetus to the control of tobacco use.

42. The Committee on World Food Security is preparing a global strategic framework on food security and nutrition. In the meantime, a series of general principles can be derived from existing policy frameworks, country experience and analysis of the evidence. For example, chronic malnutrition has been successfully reduced in some countries in South-East Asia and Latin America thanks to the simultaneous implementation of policies and programmes aimed at improving food security, reducing poverty and social inequalities, and enhancing maternal education.

43. For food security, increased access to foods of good nutritional quality¹ should be ensured in all local markets at an affordable price all year round, particularly through support to smallholder agriculture and women's involvement but with consideration being given to the potential negative impact of labour-displacing mechanization and cash-crop production and of pressure on women's time. In food manufacture, the nutrient profile, including better micronutrient content and reduced content of salt, sugar and saturated and *trans*-fats, needs to be improved. In the area of education, better women's education and improvements in water and sanitation are associated with better child nutrition.

44. Employment policies are crucial to household food security, but labour policies should also ensure adequate maternity protection and that employees could work in a better environment, including protection from second-hand smoke, and access to healthy food. An adequate environment should be created in the workplace for breastfeeding mothers. Social protection is needed to redress inequalities and must reach the most vulnerable. Cash transfers to the poor are used to guarantee food

¹ Food with high nutrient density and low concentrations of nutrients associated with increased risk of noncommunicable diseases.

needs. Conditional cash transfers, linking the receipt of cash to bringing children to health centres and school, can have a positive impact on children's nutritional status, including increase in height and birth weight.

45. Trade measures, taxes and subsidies are an important means of guaranteeing access and enabling healthy dietary choices. They can be powerful tools when associated with adequate information for consumers through nutrition labelling and responsible food marketing, and with social marketing and promotion of healthy diets and healthy lifestyles.

46. Table 2 provides examples of policy measures that engage different relevant sectors which may be considered.

47. **Proposed activities for Member States**

(a) review sectoral policies in agriculture, social protection, education, labour and trade to determine their impact on nutrition and include nutrition indicators in their evaluation frameworks;

(b) establish a dialogue between health and other government sectors in order to consider policy measures that could improve the nutritional status of the population and to address potential conflict between current sectoral policies and health policies aimed at improving nutrition;

(c) implement the recommendations on the marketing of foods and non-alcoholic beverages to children (resolution WHA63.14).

48. **Proposed activities for the Secretariat**

(a) develop methodological guidelines on the analysis of the health and nutrition impact of sectoral policies, including that on different socioeconomic and other vulnerable groups (e.g. indigenous peoples);

(b) identify and disseminate examples of good practice of sectoral policy measures benefiting nutrition.

49. **Proposed activities for international partners**

(a) engage in consultations in order to analyse the health and nutrition implications of existing policies involving trade, agriculture, labour, education, and social protection, with the aim of identifying and describing policy options to improve nutritional outcomes;

(b) analyse evidence of effectiveness of interventions aimed at improving food security, social welfare and education in low-income countries.

ACTION 4: To provide sufficient human and financial resources for the implementation of nutrition interventions

50. Technical and managerial capabilities are needed for implementation of nutrition programmes at full scale and for the design and implementation of multisectoral policies. Capacity development should be an integral part of plans to extend nutrition interventions. The availability of human

resources limits the expansion of nutrition actions, and the proportion of primary care workers to the population is a major determinant of programme effectiveness. Capacity building in nutrition is required in both the health sector at all levels and other sectors.

51. More financial resources are needed to increase the coverage of nutrition interventions. Currently, nutrition programmes receive less than 1% of overall development assistance. The World Bank has calculated that US\$ 10 500 million would be needed each year to implement on a national scale top-priority nutrition interventions in the countries with the highest burden of maternal and child undernutrition.¹ Furthermore, predictable resources are essential to sustain an increased level of programme delivery.

52. Joint efforts are required of both governments and donors. Increased resources may come from innovative financing mechanisms, such as the ones discussed in the context of maternal and child health.

53. Governments need to establish a budget line for nutrition programmes and identify financing targets for nutrition programmes. Excise taxes (for example, on tobacco and alcohol) may be used to establish national funds to expand nutrition interventions.

54. At the international level, mechanisms considered for maternal and child health promotion include an international financing facility, advance market commitments to fund research and development, a “De-Tax” to earmark a share of value-added taxes on goods and services for development, and voluntary solidarity contributions through electronic airline ticket sales or mobile phone contracts. Results-based funding as an incentive to achieve targets has also been considered by donors.

55. From the expense side, greater efficiency needs to be sought in funding programmes, including better alignment of donors’ investments with national priorities, and measures to reduce the cost of micronutrient supplements and ready-to-use therapeutic food, also by reducing patenting fees.

56. Financial monitoring and transparency in the use of resources will be needed for better accountability and increased efficiency.

57. **Proposed activities for Member States**

- (a) identify and map capacity needs, and include capacity-development in plans to expand nutrition actions;
- (b) implement a comprehensive approach to capacity building, including workforce development as well as leadership development, academic institutional strengthening, organizational development and partnerships;
- (c) cost the expansion plan and quantify the expected benefits, including the proportion needed for capacity development and strengthening the delivery of services;
- (d) provide support to local communities for the implementation of community-level nutrition actions;

¹ Horton S, et al. *Scaling up nutrition. What will it cost?* Washington, DC, The World Bank, 2010.

- (e) establish a budget line and national financial targets for nutrition;
- (f) channel funds obtained from excise taxes to nutrition interventions.

58. **Proposed activities for the Secretariat**

- (a) support workforce development, leadership, technical and managerial capacities in nutrition in Member States through workshops, distance learning and communities of practice, and provision of training materials;
- (b) make available refined tools for capacity building, and support the capacity-building efforts of Member States;
- (c) provide costing tools for nutrition interventions.

59. **Proposed activities for international partners**

- (a) follow the principles of the Paris Declaration on Aid Effectiveness and the Accra Agenda for Action, and align donor support at country level;
- (b) set international competency standards, specific to the development of the public health nutrition workforce, that recognize different tiers in the workforce (frontline workers, managers and specialists) and different contexts for policy (i.e. capacities for intersectoral action) and practice (i.e. the double burden of malnutrition), and support revisions of curricula for pre-service and in-service training of all levels of health workers;
- (c) establish academic alliances aimed at providing institutional support to capacity development in Member States;
- (d) explore innovative financing tools for funding the expansion of nutrition programmes.

ACTION 5: To monitor and evaluate the implementation of policies and programmes
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60. A well-defined monitoring framework is needed to assess progress made towards the objectives of the comprehensive implementation plan. The framework has to provide accountability for the actions implemented, resources and results. Table 3 lists proposed indicators for input (policy and legislative frameworks and human resources), output and outcome (nutrition programme implementation and food security) and impact (nutritional status and mortality).

61. The proposed set of indicators needs to be adapted to the country context and priorities, but will be retained for assessment purposes at the global level. Additional indicators should be considered for monitoring progress in intersectoral action.

62. Surveillance systems should be established to ensure regular flow of information to policy-makers. Reporting time should be in line with national priorities and the requirements of the governing bodies.¹

63. Proposed activities for Member States

- (a) develop or strengthen surveillance systems for the collection of information on selected input, output/outcome and impact indicators;
- (b) implement the WHO Child Growth Standards to monitor individual growth patterns and population levels of stunting, wasting and overweight;
- (c) ensure that nutrition indicators are adequately reported in the annual review process recommended by the Commission on Information and Accountability for Women's and Children's Health in countries with lowest income and highest burden of maternal and child deaths and that social differentials are adequately highlighted.

64. Proposed activities for the Secretariat

- (a) provide methodological support for the collection of selected input, output/outcome and impact indicators, including protocols and design of surveillance systems;
- (b) establish a database of selected input, output/outcome and impact indicators;
- (c) report on global progress in developing, strengthening and implementing national nutrition plans, policies and programmes;
- (d) support Member States in implementing the WHO Child Growth Standards.

65. Proposed activities for international partners

- (a) adopt the proposed framework of indicators as a tool to monitor the implementation of development activities;
- (b) support the collection and exchange of information between organizations, with the aim of ensuring global coverage of the databases of input, output/outcome and impact indicators.

¹ Reporting implementation of the plan could be combined with the biennial reporting to the Health Assembly called for in Article 11.7 of the International Code of Marketing of Breast-milk Substitutes, adopted by the Health Assembly in resolution WHA34.22.

Table 1a. Effective direct nutrition interventions that can be expanded for delivery through the health system¹

All women of reproductive age	Women in special circumstances	All children aged 0 to 24 months	Children in special circumstances
Iron and folic acid supplementation <ul style="list-style-type: none"> – daily for pregnant women – intermittent in non-anaemic pregnant women – intermittent in menstruating women living in settings where anaemia is a public health concern 	Appropriate care of women with low body mass index	Counselling and support for optimal breastfeeding (early initiation, exclusive breastfeeding for the first six months and continued breastfeeding up to two years of age or beyond)	Integrated management of severe acute malnutrition through facility- and community-based interventions
Nutrition counselling through food-based dietary guidelines	Nutritional care and support for HIV-infected pregnant and lactating women	Counselling and support for appropriate complementary feeding	Treatment of moderate acute malnutrition
Calcium supplementation for the prevention and management of pre-eclampsia and eclampsia	Nutritional care and support in emergencies <ul style="list-style-type: none"> – multiple micronutrient supplementation for pregnant women 	Implementation of the Baby-friendly Hospital Initiative	Nutritional care and support for HIV-positive children
	Iodine supplementation (in case iodized salt is unavailable)	Implementation of the International Code of Marketing of Breast-milk Substitutes and relevant resolutions of the World Health Assembly after resolution WHA34.22	Nutritional care and support in emergencies
		Vitamin A supplementation for children from six months to five years of age in vitamin A-deficient populations	Counselling and support for appropriate infant feeding in the context of HIV infection
		Iron supplementation for children aged under five years	Counselling and support for appropriate feeding of low-birth-weight infants

¹ Based on individual country needs.

All women of reproductive age	Women in special circumstances	All children aged 0 to 24 months	Children in special circumstances
		Zinc supplementation for the management of diarrhoea	
		Nutrition counselling for the adequate care of sick children	
		Home fortification of foods intended for young children	
		Vitamin A administration as part of treatment for measles-related pneumonia for children older than six months	

Table 1b. Effective health interventions with an impact on nutrition that can be expanded for delivery through the health system

Women of reproductive age	Children aged 0 to 24 months
Prevention of adolescent pregnancy	Properly-timed cord clamping at birth
Pregnancy spacing	Deworming of children
Intermittent preventive treatment of malaria in pregnant women in high transmission areas	Provision of insecticide-treated bednets
Provision of insecticide-treated bednets	Intermittent preventive treatment of malaria in infants, in areas of high transmission in sub-Saharan Africa where plasmodial resistance to sulfadoxine-pyrimethamine is not high
Prevention of exposure to second-hand smoke and cessation of direct tobacco use, alcohol and drug consumption by pregnant women	Hand washing with soap, and other hygienic interventions
Reduction of indoor air pollution	
Prevention and control of occupational risks in pregnancy	
Prevention and control of genitourinary infections in pregnancy	
Deworming of pregnant women	

Table 2. Non-health interventions with an impact on nutrition

Sector	Intervention
Agriculture	Agricultural activities that generate employment Small-scale agriculture Production of nutrient-rich foods and of staple foods of the poor ¹ Home gardening and large-scale fruit and vegetable production Micronutrient-rich crop varieties (e.g. orange-flesh sweet potatoes) Diversified food production, and improved storage and processing of food Nutrition counselling integrated into agricultural extension programmes Women's role in agriculture supported
Food manufacturing	Local production of fortified foods, including fortified flour, oil, salt, sugar, soy and fish sauce, and fortified blended foods Local production of high nutritional quality complementary food with provisions to allow access to all sectors of the population Micronutrient fortification of complementary foods Salt iodization Improvement of the nutritional quality of foods (reduction of the content of salt, fats and sugars, and elimination of <i>trans</i> -fatty acids)
Water and sanitation	Improvement of water supply Improvement of sanitation
Education	Women's primary and secondary education Provision of healthy food in schools and pre-schools Nutrition and physical activity education in school
Labour policies	Employment-support policies Healthy nutrition in the workplace Maternity protection in the workplace (through adopting and enforcing the ILO Maternity Protection Convention, 2000 (No. 183) and Recommendation (No. 191)) Smoke-free workplaces
Social protection	Conditional cash transfers Unconditional cash transfers Support for socially disadvantaged groups to access healthy foods
Urban planning	Healthy built environments

¹ *World development report 2008: agriculture for development*. Washington, DC, World Bank, 2008. Spielman DJ, Pandya-Lorch R. Millions fed: proven successes in agricultural development. Washington, DC, International Food Policy Research Institute, 2009. Agricultural production contributes to food security, and hence indirectly to redressing undernutrition, both by increasing food availability and by increasing livelihoods and incomes of poor people, so increasing their capacity to feed their families.

Sector	Intervention
Trade	Food-price regulatory measures Agricultural subsidies Offer of food in public institutions and private food outlets Food-labelling schemes Regulation of advertising food and beverages to children Implementation of International Code of Marketing of Breast-milk substitutes
Finance	Use of excise taxes on tobacco and alcohol to finance expansion of nutrition programmes
Social mobilization	Social marketing for breastfeeding promotion, use of fortified foods, healthy diet and physical activity

Table 3. Indicators for monitoring the realization of the comprehensive implementation plan

Inputs	Outputs/outcomes	Impact
Policy/strategy environment for nutrition: nutrition governance score	Prevalence of children aged under six months who are exclusively breastfed	Incidence of low birth weight
Human resources: ratio of community health workers to total population	Proportion of children aged under five years who have received two doses of vitamin A supplements ¹	Proportion of stunted children below five years of age
Legal frameworks: adoption and effective implementation of International Code of Marketing of Breast-milk Substitutes	Proportion of households with consumption of iodized salt	Proportion of wasted children below five years of age
	Proportion of population with sustainable access to an improved water source	Proportion of thin women ² of reproductive age
	Individual food consumption score	Proportion of children below five years of age with haemoglobin concentration of <11 g/dl
	Proportion of children receiving a minimum acceptable diet at 6–23 months of age	Proportion of women of reproductive age (15–49 years) with haemoglobin concentration of <12 g/dl

¹ Children aged 6–59 months in settings where vitamin A deficiency is a public health problem.

² Women with body mass index <18.5 kg/m².

Inputs	Outputs/outcomes	Impact
	Prevalence of children (aged 0–59 months) with diarrhoea who received oral rehydration therapy and therapeutic zinc	Median urinary iodine concentration ($\mu\text{g/l}$) in children aged 6–12 years
	Proportion of pregnant women receiving iron and folic acid supplements	Maternal mortality ratio (per 100 000 live births)
		Infant mortality rate (per 1000 live births)
		Under-five year mortality rate (per 10 000/day)

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