Tools and Methods Series
Reference Document N° 13

EuropeAid

Addressing undernutrition in external assistance

An integrated approach through sectors and aid modalities

September 2011

Prepared by the European Commission, Germany, Ireland, France, Poland and the United Kingdom

EUROPEAN
COMMISSION

Europe Direct is a service to help you find answers to your questions about the European Union

Freephone number (*):
00 800 6 7 8 9 10 11

(*) Certain mobile telephone operators do not allow access to 00 800 numbers or these calls may be billed.

More information on the European Union is available on the Internet (http://europa.eu).

Cataloguing data can be found at the end of this publication.

Luxemburg: Office for Official Publications of the European Communities, 2011

ISBN 978–92–79–16974–8

doi:10.2783/51319

Printed in Belgium

PRINTED ON WHITE CHLORINE-FREE PAPER

TOOLS AND METHODS SERIES

Reference Document N° 13

Addressing undernutrition in external assistance

An integrated approach through sectors and aid modalities

September 2011

Prepared by the European Commission, Germany, Ireland, France, Poland and the United Kingdom

ACKNOWLEDGEMENTS

This document has been prepared by the Nutrition Advisory Service: Dominique Blariaux, Claire Chastre (team leader), Lola Gostelow, Lawrence Haddad, Cristina Lopriore, Yves Martin-Prével and Carlos Navarro-Colorado.

The preparation of the document has been coordinated by, and has benefited from, inputs made by representatives from Germany, Ireland, France, Poland and the United Kingdom as well as various services from the European Commission.

In light of the experience in drafting this Reference Document, modifications and adaptations will be made as and when necessary. To help with this work, comments, questions and suggestions are welcomed and should be sent to EuropeAid at the following e-mail address: DEVCO-Nutrition-Support@ec.europa.eu

WEB-BASED VERSION AND CASE STUDIES

This Reference Document and Case Studies are available on: http://capacity4dev.eu/topic/fighting-hunger

CONTENTS

ACKNOWLEDGEMENTS 2
ABBREVIATIONS 5
EXECUTIVE SUMMARY 7
CHAPTER 1: Introduction 11
1.1. Purpose and scope of the Reference Document 13
1.1.1. Using the Reference Document 13
1.1.2. Understanding malnutrition and undernutrition 14
1.2. Undernutrition and its consequences 16
1.2.1. Consequences at individual level 16
1.2.2. Consequences at national level 17
1.2.3. Consequences at international level 17
1.3. Scale of the problem 18
1.3.1. Fragile states 20
1.3.2. Trends 20
1.4. Causes of undernutrition 21
CHAPTER 2: Improving nutrition through key thematic areas 25
2.1. Improving nutrition through health 27
2.2. Improving nutrition through water/sanitation/hygiene 28
2.3. Improving nutrition through education 29
2.4. Improving nutrition through gender 30
2.5. Improving nutrition through social protection 31
2.6. Improving nutrition through food security 33
2.7. Improving nutrition through agriculture 34
2.8. The environment and sustainable management of natural resources 36
2.9. Improving nutrition through governance 37
2.10. Improving nutrition through human rights 39
CHAPTER 3: Integrating nutrition in the programming phase 41
3.1. Analysing and understanding undernutrition in context 42
3.1.1. Is there a problem of undernutrition? 42
3.1.2. Analysing and understanding governments' response to undernutrition 43
3.1.3. Analysing and understanding other stakeholders' responses to undernutrition 44
3.2. Raising the national profile of nutrition 44
3.3. Shaping a donor response to undernutrition 46
3.3.1. Setting priorities 46
3.3.2. Specific approaches for humanitarian response, transition situations and fragile states 48
3.4. Designing monitoring, evaluation and learning 49
CHAPTER 4: Nutrition in aid delivery methods 51
4.1. Guidance for addressing nutrition through general and sector approaches 53
4.2. Guidance for addressing nutrition through projects 59
4.2.1. Guidance for addressing nutrition through development projects 59
4.2.2. Guidance for addressing nutrition through humanitarian projects 61

ANNEXES

Annex 1: Glossary 68
Annex 2: Countries bearing the burden of undernutrition 73
Annex 3: Indicators 75
Annex 4: Ten steps to successful breastfeeding 84
Annex 5: health-related interventions effective for nutrition 85
Annex 6: nutrition situation analysis 86
Annex 7: terms of reference for evaluating programmes for nutrition outcomes 91

LIST OF FIGURES

Figure 1: An overview of this Reference Document 14
Figure 2: An overview of undernutrition 15
Figure 3: 90% of the world's stunted children live in 36 countries 19
Figure 4: Regional progress in addressing underweight in children 20
Figure 5: A model of the casual pathways leading to undernutrition 22
Figure 6: Nutrition framework for action 23
Figure 7: Aid delivery methods used by the European Commission 52
Figure 8: Making aid delivery methods nutrition sensitive 53

LIST OF TABLES

Table 1: The disease burden and deaths associated with undernutrition 17
Table 2: Nutrition in the millennium development goals 18
Table 3: Nutrition in the donor country strategy paper 47
Table 4a: General/global approach: steps to incorporating nutrition 55
Table 4b: Sector approach: steps to incorporating nutrition 56
Table 5: Steps to incorporate nutrition aspects when preparing project support 60
Table 6: Steps to incorporate nutrition in emergency projects 62

LIST OF BOXES

Box 1: Impact indicators potentially relevant to all aspects of external assistance 26
Box 2: Key indicators of nutrition benefits through health 28
Box 3: Key indicators for nutrition benefits through water/sanitation/hygiene 29
Box 4: Key indicators for nutrition benefits through education 29
Box 5: Key indicators of nutrition benefits through gender 30
Box 6: Key indicators of nutrition benefits through social protection 32
Box 7: Key indicators of nutrition benefits through food security and agriculture 36
Box 8: Key indicators of nutrition benefits through environment and the sustainable management of natural resources 37
Box 9: Key indicators for nutrition benefits through governance 39
Box 10: Key indicators for nutrition benefits through human rights 40
Box 11: Introducing nutrition objectives into a national strategic framework 45
Box 12: Incorporating nutrition objectives in programming 46
Box 13: Principles of good international engagement in fragile states 48
Box 14: Sector terminology 52
Box 15: Key nutrition indicators for general and sector approaches 57
Box 16: Key issues concerning nutrition in humanitarian response 61
Box 17: Key nutrition indicators in emergencies 65

ABBREVIATIONS

AAP	annual action programme
BMI	body mass index (see glossary)
CSP	country strategy paper
DAC	Development Assistance Committee (of OECD)
DALY	disability adjusted life year (see glossary)
DCI	Development Cooperation Instrument
DHS	demographic and health surveys
DG	Directorate-General of the European Commission
DEVCO	Directorate-General for Development and Cooperation — EuropeAid
EC	European Commission
ECHO	Directorate-General for Humanitarian Aid and Civil Protection
EDF	European Development Fund
EEAS	European External Action Service
EU	European Union
FAO	Food and Agriculture Organisation (UN)
GAM	global acute malnutrition (i.e. moderate and severe)
GBS	general budget support
MAM	moderate acute malnutrition
MDG	millennium development goals
MICS	multiple indicator cluster surveys
MS	Member States of the EU
NIP	national indicative programme
NSA	nutrition situation analysis
OECD	Organisation for Economic Cooperation and Development
PAN	Programa Articulado Nutricional, (national programme in Peru)
PCM	project cycle management
PFM	public finance/financial management
Progresa	Programa De Educación, Salud y Alimentación, (national programme in Mexico)
PRSP	poverty reduction strategy paper
SAM	severe acute malnutrition
SBS	sector budget support
SPSP	sector policy support programme
SWAp	sector-wide approach
TAP	technical and administrative provisions
ToR	terms of reference
UNDAF	United Nations Development Assistance Framework
Unicef	United Nations Children's Fund
WB	World Bank
WHO	World Health Organisation

EXECUTIVE SUMMARY

Bachari and his friend, Maman, are both 3, but malnutrition when he was a baby has left Bachari (right) severely stunted. ***Source:*** Amadou Mbodj/Save the Children (Running on Empty)

The **EU Reference Document on *Addressing Undernutrition in External Assistance*** seeks to help transform aid programmes so that they can achieve real progress in preventing undernutrition. It provides a detailed description of how nutrition benefits can be realised by modifying the design of programmes in all relevant sectors and thematic areas — from health to governance, food security to gender. Nutrition-specific objectives need to be incorporated in the design of assistance programmes – whatever the sector or aid modality – thereby seeking and measuring specific results on nutrition. Tackling undernutrition thus becomes the responsibility of all, not just left to technical experts.

This Reference Document is intended as a **resource to guide the practical incorporation of nutrition objectives into relevant sectors and different funding modalities** used by the European Union (EU) — whether in development cooperation or in humanitarian response. It is targeted primarily at aid administrators working within country teams — delegations of the EU and offices of Member States.

The Reference Document has been structured and written in such a way that the **chapters can be read independently**. The only exception to this is humanitarian assistance, because there are no absolute divisions between emergency nutrition interventions and development interventions. To ensure sustainable progress on nutrition and save lives, there is a need for contiguity between nutrition emergency action and development. The critical requirement, always, is to ensure that the situation is analysed as fully as possible to determine the best course of action.

Chapter 1 provides an overview of the consequences of undernutrition, the scale of the problem and its causes.

Undernutrition is the biggest development challenge facing the world [1].

Over 3 million children under the age of five die each year as a result of undernutrition. One in five maternal deaths is associated with undernutrition. The current reality [2], is that:

- A **third of children** aged below five years in low/middle-income countries (around 195 million), are **stunted**.
- About **75 million (13%) children** under five years of age in low/middle-income countries are **wasted**.
- **19 million babies a year** start life with a **low birth weight** due to poor growth in the womb.

Undernutrition is both a consequence and a cause of poverty. The knock-on **economic costs of undernutrition have been estimated at 10% of individuals' lifetime earnings** [3] **and at 2% to 8% of a nation's GDP**. [4]

Improved nutrition can drive economic growth. Equitable economic growth, which benefits the poorest, can, in turn, significantly help improve nutrition. However, countries and development actors need to, first, create a policy environment geared to addressing undernutrition, and, second, invest in a coherent package of measures.

There are numerous possible causes of undernutrition that operate at the individual, household, community and national levels: from inadequate policies to income poverty and poor quality diet, from gender discrimination to lack of access to basic services.

Given the complex interplay of causes, the mobilisation of several sectors described in this document is required to act on multiple determinants and prevent and/or address long-term undernutrition.

Chapter 2 provides a detailed **description of how nutrition benefits can be realised by adapting the design of programmes in all relevant sectors and thematic areas** – from health to social protection, agriculture to water and sanitation – and by choosing appropriate indicators to monitor progress.

Chapter 3 provides **guidance on how nutrition concerns can be integrated throughout the various programming phases**, so that it is analysed and understood within a given context and a donor's response is designed so as to be coherent with the strategies and actions of the government and other stakeholders.

Chapter 4 provides **guidance for addressing nutrition through two broad categories of aid delivery methods: general/sector budget approaches and the project approach**. Each aid delivery method offers an opportunity to introduce and embed nutrition-related concerns and factors. The process of working through each method tends to include several key steps that are common to all methods: situation analysis; designing assistance; monitoring and learning.

(1) This was one of the conclusions of an expert panel of economists at the Copenhagen Consensus of 2008 www.copenhagenconsensus.com.
(2) The figures are sourced from UNICEF, 2009. *Tracking Progress on Child and Maternal Nutrition*.
(3) World Bank, 2006. *Repositioning Nutrition as Central to Development - A Strategy for Large-Scale Action.*
(4) Horton and Ross, 2003. The economics of iron deficiency. *Food Policy* 28 (2003) 51–75.

A Call to Joined-Up Action

At the core of the EU Reference Document on *Addressing Undernutrition in External Assistance* is a call to join up action – joining analysis and evidence to action; joining different levels of causes in order to sustain improvements; joining efforts across different sectors to build coherence; joining government aspirations and efforts to external support; and joining shorter-term investments to longer-term progress. In time, it is also hoped that this Reference Document will support on-going efforts to join up the approaches and priorities of the EU's aid institutions across its Member States, thereby creating international momentum to combat undernutrition once and for all.

Chapter 1: Introduction

Undernutrition kills more than 3 million children every year. For those who survive, it can have irreversible consequences on their physical growth and mental development. This in turn undermines virtually every aspect of economic and human development. Up to 8% of GDP can be lost as a result of undernutrition.

Yet undernutrition is wholly preventable, and there is sound evidence on the measures likely to have the greatest impact. International assistance needs to be planned comprehensively so as to use all possible avenues to prevent and mitigate the very serious consequences of undernutrition.

Current international concern and the increasing commitment shown means that it is time to harness the potential to combat undernutrition. At the L'Aquila Summit in 2009, heads of states called for increased support for food and nutrition security outcomes. The World Health Assembly adopted a specific resolution on infant and young child feeding ([5]) calling for nutrition policies to be pro-poor, focus on people with specific nutritional requirements and be rooted in a multi-sectoral approach.

The European Union has recently adopted several policies reflecting its increased commitment to fight undernutrition. Through different avenues, the Global Health, Food Security and Food Assistance Communications take the first steps towards a common framework for the EU and its Member States in combating malnutrition. More importantly, individual countries have launched their own programmes and strategies ([6]). This document is in line with these and highlights concrete steps to translate the political commitments into action and measurable impact.

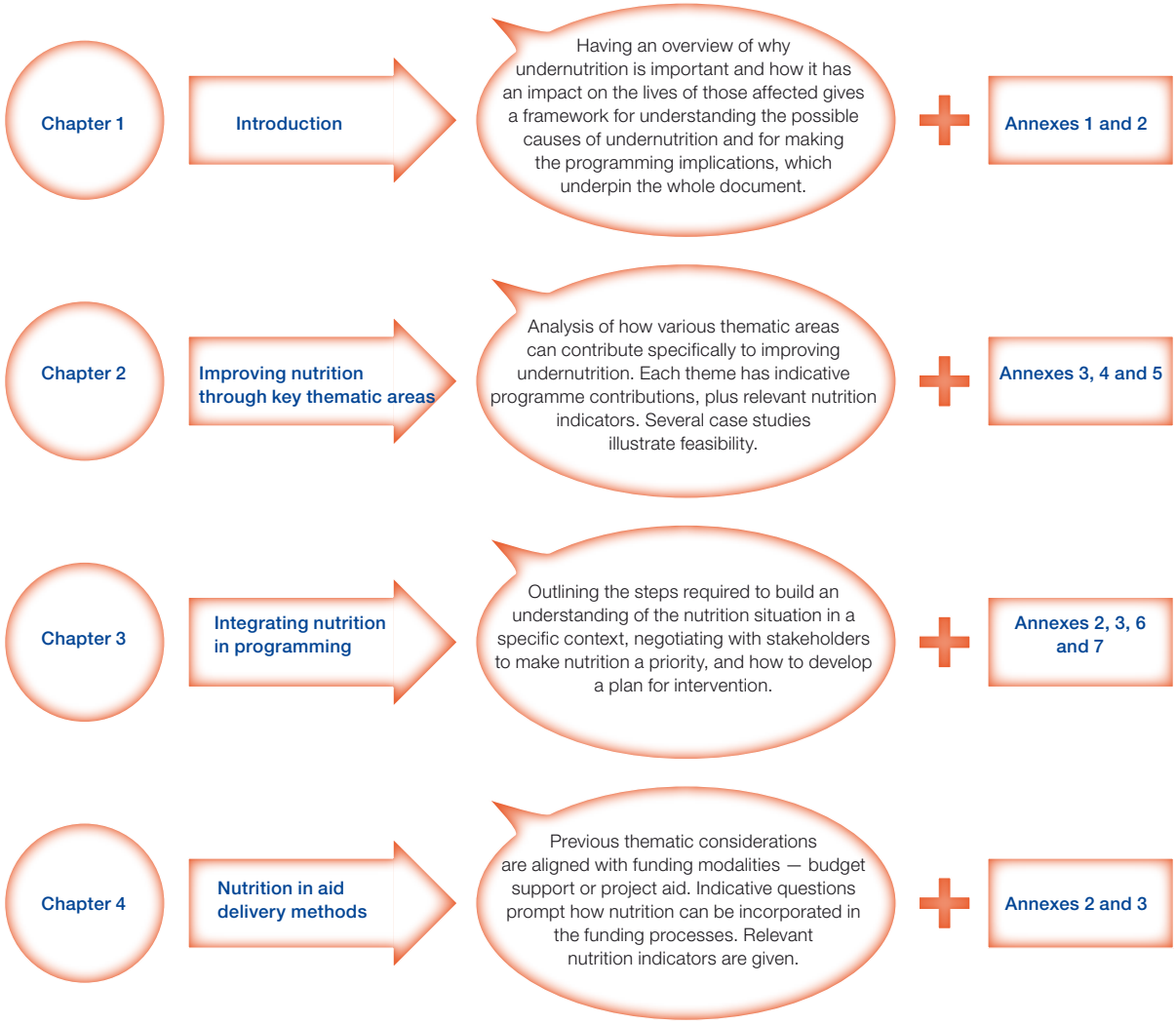
The term undernutrition encompasses a range of conditions that are due to insufficient food intake and repeated infectious diseases. Individuals may be underweight, too short for their age (stunted), dangerously thin (wasted) or deficient in vitamins and/or minerals (micronutrient malnutrition).

Undernutrition is closely associated with food insecurity and hunger, but is distinct from them. Undernutrition is a physical outcome; food insecurity describes the socioeconomic circumstances whereby individuals or households are unable to access enough quality food for an active healthy life. Hunger is a term used to describe estimates in the deficit of food intake for population groups — regardless of whether there is evidence of undernutrition.

(5) Sixty-third World Health Assembly Resolutions, 21 May 2010 (www.who.int/mediacentre/news/releases/2010/wha_closes_20100521/en/index.html).

(6) For instance, 'The neglected crisis of undernutrition: DFID's Strategy' (http://collections.europarchive.org/tna/20100423085705/http://dfid.gov.uk/Documents/publications/nutrition-strategy.pdf); and the French government strategy: 'Nutrition dans les Pays en Développement — Document d'Orientation Stratégique' (www.diplomatie.gouv.fr/fr/ministere_817/publications_827/enjeux-plan-etaires-cooperation-internationale_3030/documents-strategie-sectorielle_20004/les-pays-developpement-nutrition_87987.html).

1.1 Purpose and scope of the Reference Document



The purpose of this Reference Document is to help transform aid programmes so that they achieve real progress in this area. The key is to incorporate nutrition-specific objectives into their design and to monitor progress with nutrition-specific indicators.

This Reference Document is intended as a resource to guide the practical incorporation of nutrition objectives into relevant sectors and different funding methods used by the European Union (EU) — whether in development cooperation or in humanitarian response.

The Reference Document is targeted primarily at aid administrators working within country teams — delegations of the EU and offices of Member States. It seeks to complement and extend existing efforts by Member States. In addition, it is anticipated that the discussions likely to emerge from the guidance here may prove of use to national counterparts and other stakeholders.

No nutrition expertise is assumed, or required, to apply the guidance.

1.1.1 Using the Reference Document

Users are likely to focus on the specific sections that are most relevant to them. For this reason, the Reference Document has been structured and written in such a way that the chapters can be read independently. The only exception to this is humanitarian assistance, because there are no absolute divisions between emergency nutrition interventions and development interventions. To ensure sustainable progress on nutrition and save lives, there is a need for contiguity between nutrition emergency action and development. The critical requirement, always, is to ensure that the situation is analysed as fully as possible to determine the best course of action. Thus, all sections have been written with all types of operational context in mind. Occasionally, specific pointers are given regarding nutrition in emergencies.

Figure 1: An overview of this Reference Document

Throughout the document, the core text is accompanied by the following additional information:

	Case studies, highlighted in orange boxes. Additional case studies are also available online at the following website: http://capacity4dev.eu/topic/fighting-hunger
	Practical tips and guidance
	Critical questions to consider
	Sources of further information: a list of references is available in a web link.

Text in *italics* denotes direct excerpts from references cited.

1.1.2. Understanding malnutrition and undernutrition

'Malnutrition' encompasses both undernutrition and overnutrition (obesity). Although there are serious public health concerns about the increasing levels of obesity around the world, and the pressure this puts on health systems, the imperative to act on undernutrition remains even greater, hence the focus of this Reference Document.

Undernutrition is defined ([7]) as the outcome of insufficient food intake and repeated infectious diseases. Undernutrition describes a range of conditions: it includes being underweight for one's age, too short for one's age (stunted), dangerously thin (wasted), and deficient in vitamins and/or minerals (micronutrient malnutrition). There are several ways of assessing undernutrition, typically with body measurements such as weight, height or arm circumference (anthropometry).

A full explanation of terms is given in the glossary in **Annex 1. Figure 2** provides a simplified summary of the types of undernutrition.

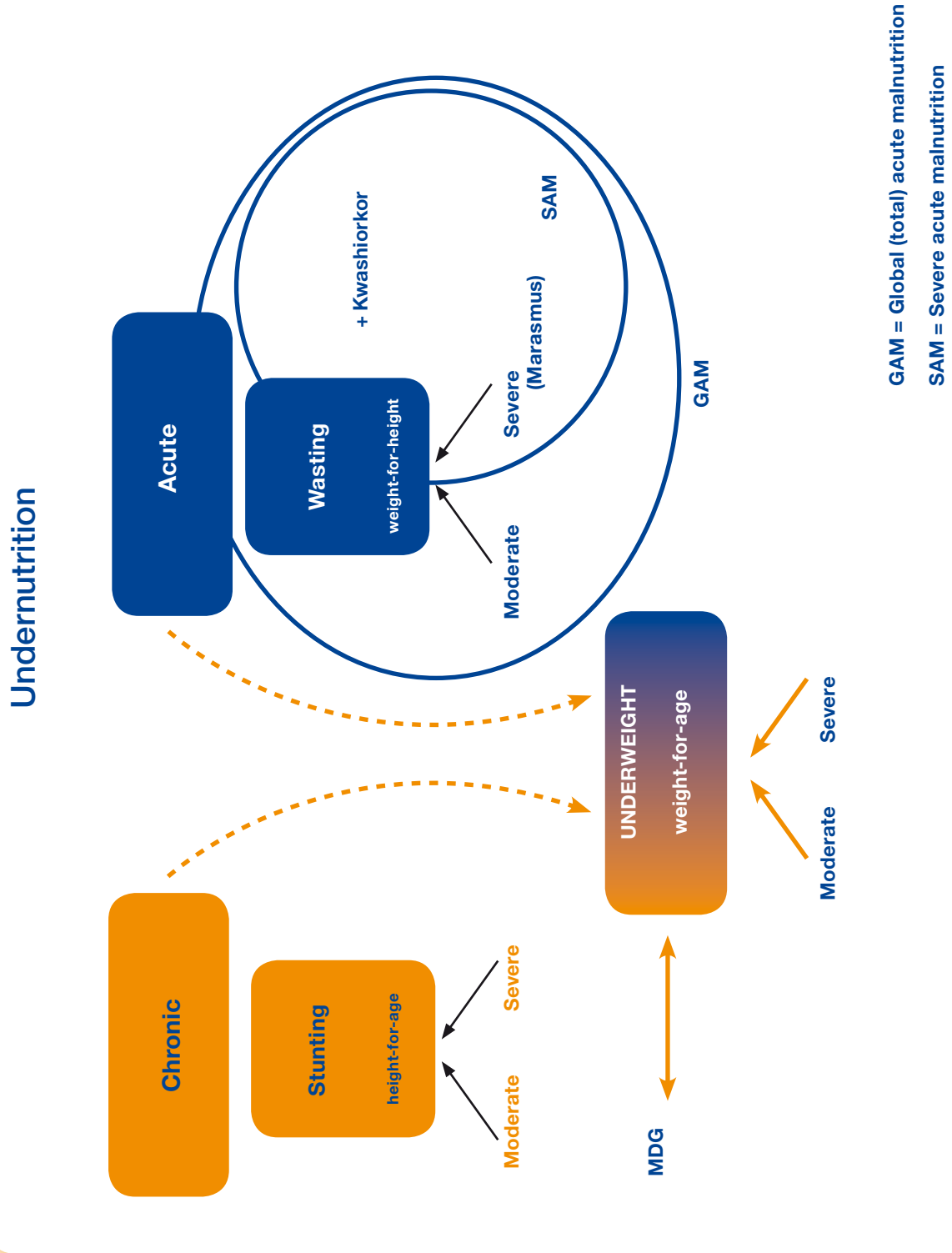
While it is recognised that nutrition is important throughout a person's life, the most vulnerable and critical period is during pregnancy and from birth to 2 years of age. This is when undernutrition can cause long-lasting health and developmental consequences (as described below), unless it is reversed at this stage. This period is therefore the priority. It offers a crucial window of opportunity to ensure that the right conditions are in place for optimal growth.

Making the period from pregnancy to 2 years of age a core priority implies seeking and measuring results of actions specifically for this group/period. However, this does not need to be at the exclusion of other groups of concern. It is not, necessarily, a targeting criterion because actions targeted at households, communities or nations can also result in improved nutrition for pregnant women and children under the age of 2 years (see Section 1.4). Along the same lines, interventions could be extended to children under the age of 5 when undernutrition is responsible for high mortality rates amongst these older children.

The period from pregnancy to 24 months of age is a crucial window of opportunity for reducing undernutrition and its adverse effects ([8]).

(7) Unicef definition is used here.

Figure 2: An overview of undernutrition



1.2 Undernutrition and its consequences

Undernutrition includes a broad range of conditions that arise from a deficit in the energy, protein and/or micronutrients provided by the diet. The deficit may be caused by insufficient intake (and may be described as 'hunger') or poor use of those nutrients consumed (associated with illness or 'morbidity'). See Section 1.4.

1.2.1 Consequences at individual level

Undernutrition in children and mothers has devastating consequences in developing countries:

- undernutrition causes the death of over 3 million children every year ([9]);
- it contributes to 35% of the illnesses suffered by children under 5;
- it contributes to 11% of the illnesses suffered globally (adults and children);
- undernutrition in childhood increases the risk of chronic illness in adulthood (such as diabetes and obesity), with serious consequences for adult health, productivity and survival;
- a girl affected by stunting in the early stages of life (from pregnancy to 2 years of age) is more likely to grow into a shorter woman. This deprivation impairs birth outcomes, her babies are more likely to be small and face a higher risk of undernutrition;
- also, the mother is more likely to die in childbirth (iron deficiency anaemia and low height in pregnant mothers are implicated in one in five maternal deaths).

Table 1: The disease burden and deaths associated with undernutrition ([10])

	Deaths	% of deaths in children under 5 years	Disease burden (1 000 DALYs)	% of DALYs in children under 5 years
Stunting	1 491 188	14.5	54 912	12.6
Wasting	1 509 236	14.6	64 566	14.8
Low birth weight	337 047	3.3	15 536	3.1
Vitamin A deficiency ([11])	667 771	6.5	22 668	5.3
Zinc deficiency ([12])	453 207	4.4	16 342	3.8
Iron deficiency ([13])	20 854	0.2	2 156	0.5
Iodine deficiency ([14])	3 619	0.03	2 614	0.6

Note: DALY stands for disability adjusted life year.

(8) Bryce, J., et al. (2008), 'Maternal and child undernutrition No 4: Effective action at national level', *The Lancet.*

(9) Statistics are sourced from *The Lancet*'s Series on 'Maternal and child undernutrition' (2008), unless otherwise stated.

(10) *Source*: *The Lancet*'s Series (2008), 'Global deaths and disability-adjusted life years (DALYs) in children under 5 years of age attributed to nutritional status measures and micronutrient deficiencies in 2004'.

(11) Vitamin A deficiency in children can cause blindness and increases the risk of disease and death from severe infections.

(12) Zinc deficiency in children results in increased risk of diarrhoea, pneumonia and malaria.

(13) Iron deficiency in children increases the risk of morbidity and impairs physical and cognitive development. For adults, it increases the risk of poor pregnancy outcomes and reduces work productivity.

(14) Iodine deficiency impairs children's cognitive development. Severe iodine deficiency during pregnancy can lead to stillbirth, spontaneous abortion and congenital abnormalities such as cretinism.

(15) Grantham-McGregor, et al. (2007), 'Child development in developing countries 1: Developmental potential in the first 5 years for children in developing countries' *The Lancet*, paragraph 369: 60–70, excerpts from p. 63.

(16) Ibid, page 63.

(17) World Bank (2006), *Repositioning Nutrition as Central to Development — A Strategy for Large-Scale Action*, International Bank for Reconstruction and Development, Washington.

(18) World Bank (2006), 'Repositioning Nutrition as Central to Development — A Strategy for Large-Scale Action'.

(19) Data from 50 countries, Gwatkin, R.D., et al. (2007), *Socio-economic differences in health, nutrition, and population within developing countries — An overview*, World Bank.

Undernutrition, in addition to its physical consequences, impairs individuals' mental capacity.

- Undernutrition impairs brain development so that children do less well at school. *There is evidence that stunted children, compared with non-stunted children, were less likely to be enrolled in school, more likely to enrol late, to attain lower achievement levels or grades for their age, and have poorer cognitive ability or achievement scores* ([15]).
- Studies in 79 countries show that every 10% increase in stunting is matched by a 7.9% drop in the proportion of children reaching the final grade of primary school ([16]).
- Iodine deficiency impairs the mental development of 18 million babies born each year ([17]).
- Low birth weight may reduce a person's IQ by five percentage points.

The combination of physical and mental impairment plus weaker health leads to fewer income opportunities and lower success in an individual's working life. The economic costs of undernutrition have been estimated at 10% of individuals' lifetime earnings ([18]). This has a bearing on the development prospects of countries.

1.2.2 Consequences at national level

Undernutrition is both a consequence and a cause of poverty. It disproportionately affects poor people. For example, severe stunting is almost three times higher amongst the poorest population groups than the richest ones ([19]).

- The economic costs of undernutrition have been estimated at 2% to 8% of GDP ([20]). Even a single micronutrient may have an impact on national economies. For instance, iron deficiency anaemia has been shown to be responsible for a 5.2% drop in GDP in Pakistan and a 7.9% drop in GDP in Bangladesh, though further research is needed to validate these findings ([21]).
- Undernutrition puts a strain on over-stretched health systems, immediately, because undernourished individuals are more likely to be sick, and in the long term, as undernutrition in childhood is associated with chronic, costly, diseases later in life.

Improved nutrition can drive economic growth. Equitable economic growth — that benefits the poorest — can significantly help improve nutrition. However, even equitable economic growth will not be sufficient to tackle undernutrition. Countries and development actors need to, first, create a policy environment geared to addressing undernutrition, and, second, invest in a coherent package of measures.

***Undernutrition is the biggest development challenge facing the world* ([22]).**

1.2.3 Consequences at international level

Political interest in nutrition has been fuelled by concerns that the millennium development goals (MDGs) are unlikely to be achieved by the target date of 2015 and a realisation that adequate nutrition is required to achieve three of them (**see Table 2**).

(20) Horton and Ross (2003), 'The economics of iron deficiency', *Food Policy,* No 28, pp. 51–75.
(21) Ibid.
(22) This was one of the conclusions of an expert panel of economists at the Copenhagen Consensus of 2008 (www.copenhagenconsensus.com).

Table 2: Nutrition in the millennium development goals

Goal 1: Eradicate extreme poverty and hunger	
Target: halve the proportion of people who suffer from hunger	
Indicators:	1.1. Prevalence of underweight children aged below 5 years
	1.2. Proportion of population below minimum level of dietary energy consumption
Goal 4: Reduce child mortality	
Target: reduce by two-thirds the under-5 mortality rate	
Indicators:	4.1. Under-5 mortality rate
	4.2. Infant mortality rate
	4.3. Proportion of 1 year-old children immunised against measles
Goal 5: Improve maternal health	
Target: reduce by three-quarters the maternal mortality ratio	
Indicators:	5.1. Maternal mortality ratio
	5.2. Proportion of births attended by skilled health personnel

In addition, undernutrition impedes the attainment of three other goals ([23]).

Goal 2: Achieve universal primary education (undernourished children are less likely to enrol in school, more likely to enrol later and more likely to drop-out of school at an earlier age).

Goal 3: Promote gender equality and empower women (undernourished girls are less likely to stay in school and therefore have diminished chances to control future life choices).

Goal 6: Combat HIV/AIDS, malaria and other diseases (undernutrition hastens the onset of AIDS among HIV-positive persons; babies born to HIV-positive mothers may become nutritionally deprived through early cessation or even absence of exclusive breastfeeding; undernutrition reduces malaria and tuberculosis survival rates and weakens resistance to infections).

Thus, the MDGs and nutrition are interdependent: improved nutrition contributes to achieving the MDGs; and achieving the MDGs underpins an effective response to undernutrition.

1.3 Scale of the problem [24]

- Around 195 million, or a third of children below 5 years in low/middle-income countries, are stunted.
- About 75 million children (13%) under 5 years of age are wasted, 26 million severely so.
- 19 million babies are born each year with a low birth weight due to poor growth in the womb.
- Around 33% (190 million) of preschool age children and 15% (19 million) of pregnant women lack sufficient vitamin A in their diet and can be classified as vitamin A deficient.
- Iron deficiency affects about 25% of the world's population, especially young children and women.
- 41 million newborns are not protected against iodine deficiency disorders ([25]).

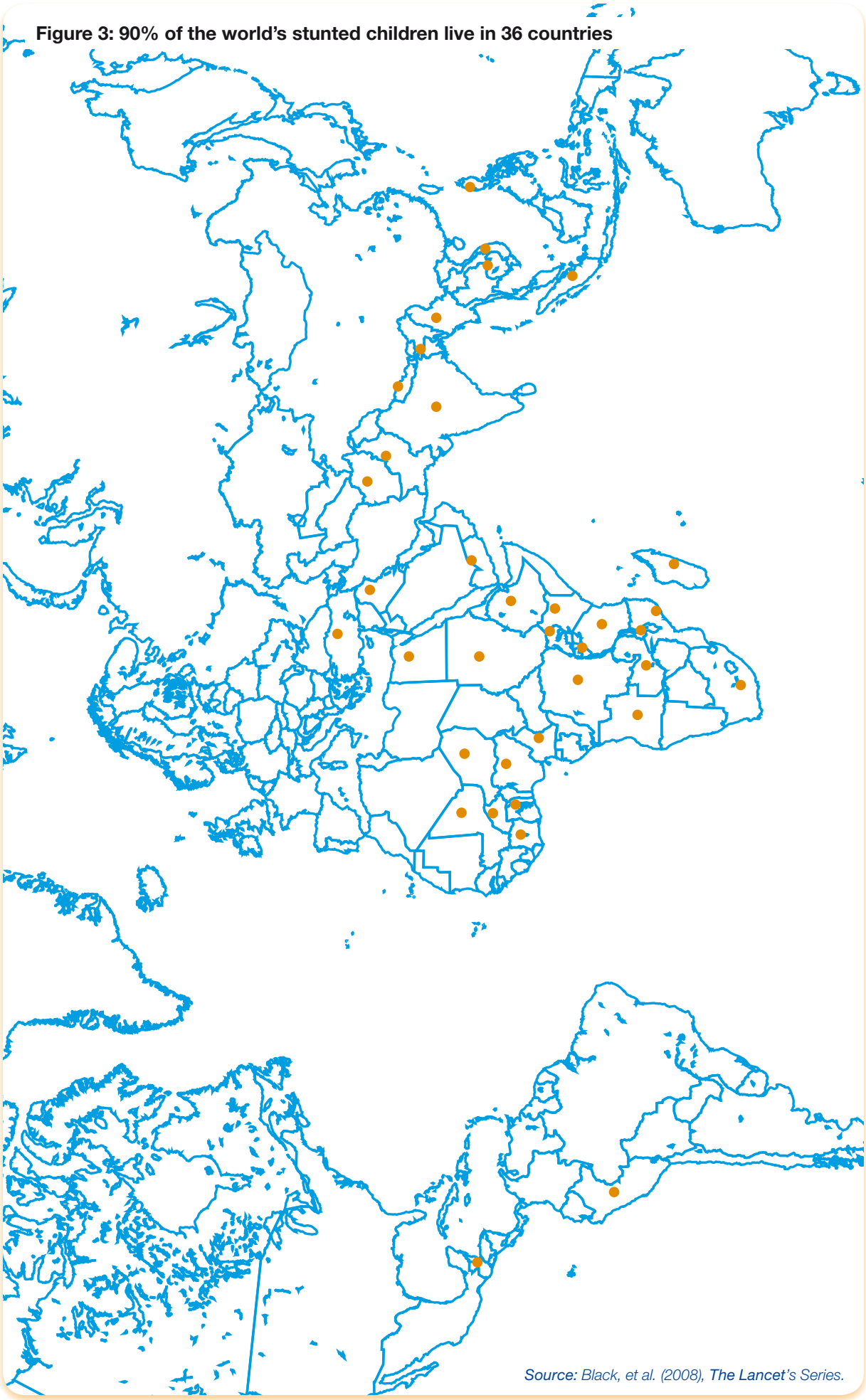
Although the numbers affected are high, undernutrition is concentrated in relatively few countries.

- Around 80% of the world's stunted children live in 24 countries.
- Around 80% of the world's underweight children live in 10 countries ([26]).
- The regions worst affected by undernutrition are south-central Asia and sub-Saharan Africa.

Annex 2 lists the countries with the highest numbers and the highest prevalence rates (proportion) of stunted children. Those bearing the greatest burden are shown in **Figure 3**.

(23) SCN, (2004), *Fifth Report on the World Nutrition Situation*.
(24) The figures in this section are sourced from Unicef (2009), *Tracking Progress on Child and Maternal Nutrition*.
(25) From: www.childinfo.org/idd_status.html (data from 2003–08).
(26) India, Pakistan, Bangladesh, Nigeria, China, Ethiopia, Indonesia, DRC, Philippines and Afghanistan.

Figure 3: 90% of the world's stunted children live in 36 countries



Source: Black, et al. (2008), The Lancet's Series.

1.3.1 Fragile states

Fragility refers to weak or failing structures and to situations where the social contract is broken due to the state's incapacity or unwillingness to deal with its basic functions, meet its obligations and responsibilities regarding service delivery, management of resources, rule of law, equitable access to power, security and safety of the populace and protection and promotion of citizens' rights and freedoms ([27]).

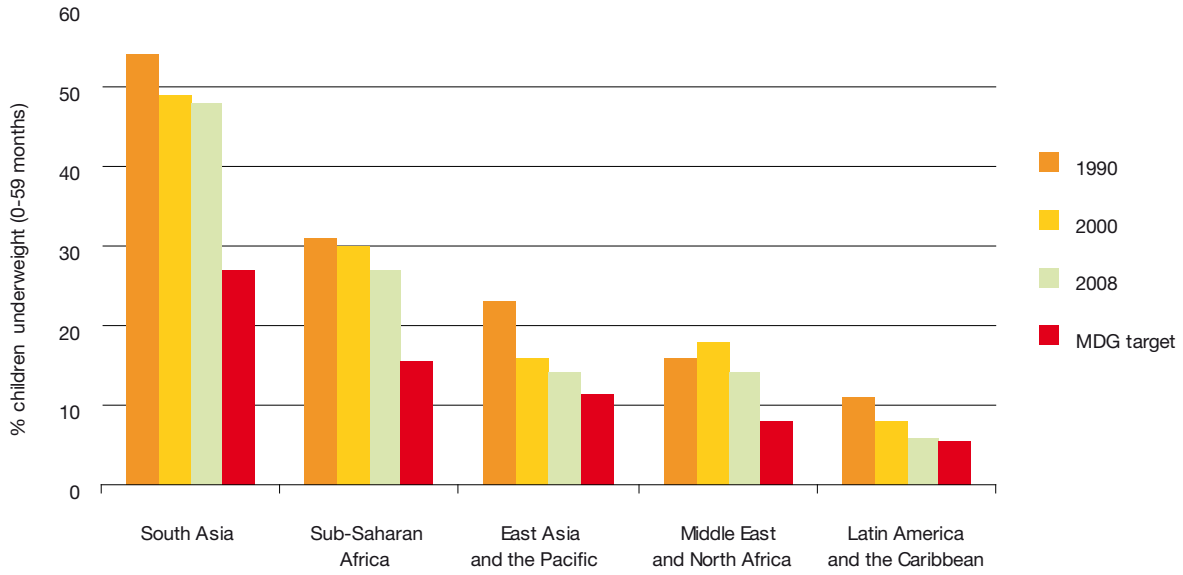
Forty eight countries identified by the OECD as fragile or conflict-affected are home to about a third of the world's stunted children aged below 5 years. Half of the 36 countries where 90% of the world's stunted children live are considered 'fragile' according to OECD criteria ([28]).

Nutritional deprivation and hunger can contribute to both the causes and consequences of fragility. Early warning of food insecurity, and/or evidence of nutritional deterioration may be incorporated into analyses of a state's fragility. The EU and Member States are committed to preventing fragility, addressing its root causes and tackling its consequences. This requires comprehensive engagement with a coordinated application of the various humanitarian, development, diplomacy, law enforcement and security instruments.

1.3.2 Trends

Progress towards MDG 1 is slow and insufficient. The proportion of underweight children under 5 years of age declined from 31% to 26% between 1990 and 2008; against the 2015 target of 15% (**Figure 4** shows that the proportion fell in all regions).

Figure 4: Regional progress in addressing underweight in children



*Source: Unicef (2010), **Progress for Children, Achieving the MDGs with Equity,** No 9, September 2010, p. 16.*

- Out of 118 countries, 37 have made insufficient progress and 19 have made none ([29]). Most of these 19 are in Africa, where the absolute number of underweight children is projected to continue increasing (having risen from 27 million in 1980 to 44 million in 2005 ([30]).
- Across developing regions (south Asia, sub-Saharan Africa and the Middle East and north Africa), underweight is more prevalent amongst the poorest children and those living in rural areas ([31]).
- Improvements in nutrition are not shared equally across all population groups. In India, for example, the prevalence

(27) Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions, 'Towards an EU response to situations of fragility — Engaging in difficult environments for sustainable development, stability and peace', Brussels, 25.10.2007, COM(2007) 643 final, p. 5 (http://ec.europa.eu/development/icenter/repository/COM_2007_0643_EN.pdf).

(28) ***The Lancet***'s list of countries was compared to the OECD's list, given in: OECD (2008), 'Resource flows to fragile and conflict-affected states', ***Annual Report***.

(29) Unicef, (2010), 'Progress for Children', ***Achieving the MDGs with Equity***, No 9, September 2010, p. 16.

(30) A., Sumner, et al. (2007), ***Greater DFID and EC Leadership on Chronic Malnutrition: Opportunities and Constraints***, Institute of Development Studies, commissioned by Save the Children UK, pp. 4 and 33.

(31) Unicef (2010), 'Progress for Children', ***Achieving the MDGs with Equity***. No 9, September 2010, p. 17.

of underweight in the richest 20% children dropped by about a third from 1990 to 2008, whereas in the poorest 20% children, there was no significant difference ([32]).

- Trends in micronutrient deficiencies are less clear, partly because of changes in methodology, inclusion of younger infants and expansion of preventive programmes. Data from 2004 show how micronutrient deficiencies continue to be significant, especially Vitamin A and zinc ([33]).

1.4 Causes of undernutrition

There are numerous possible causes of undernutrition. They are usually analysed in terms of three levels — immediate, underlying or basic causes. These levels are based on Unicef's conceptual framework developed in the 1990s, which still underpins much of the thinking around the problem internationally (see **Figure 5** below).

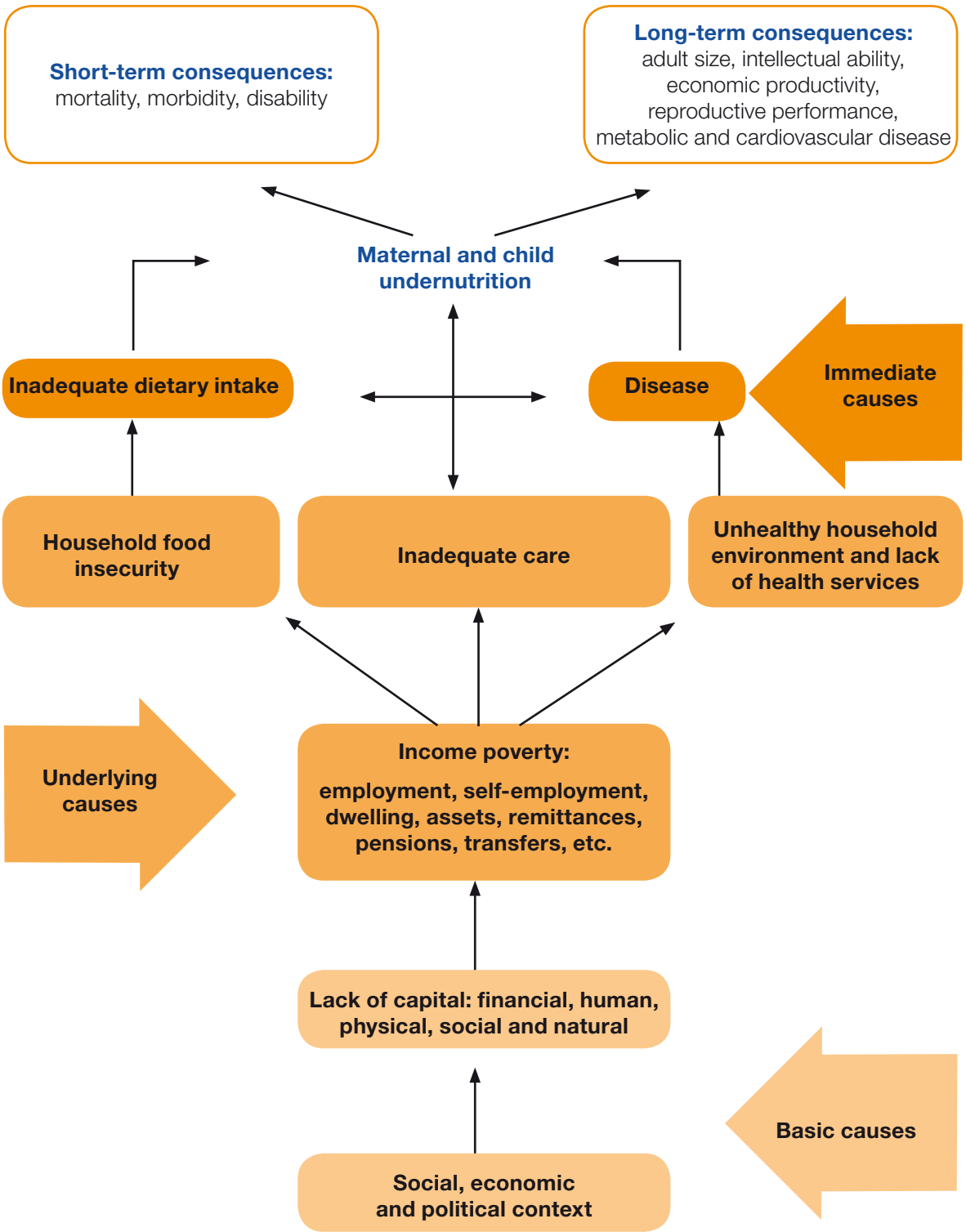
- Immediate causes relate to individual level and have two dimensions: dietary intake and health status. This distinction emphasises the limitation of 'hunger' to denote undernutrition, for hunger may or may not be a cause of undernutrition.
- Underlying causes operate at household and community levels. They comprise three categories: household food security, care for children/women and health environment/health services. Income poverty underpins all three.
- Basic causes include a range of factors operating at subnational, national and international levels, ranging from natural resources, social and economic environments to political contexts.

The relative importance of potential causes depends on the specific dynamics of each situation and population group. For this reason, a thorough situation analysis is a critical pre-requisite to any response effort (see Chapter 3).

The various determinants of undernutrition can act in synergy so that one cause influences others. Given this complex interplay, a multi-sectoral approach is required to act on multiple determinants and prevent/address long-term undernutrition. This is also true in humanitarian contexts, although assistance tends to prioritise life-saving interventions focused on immediate and underlying causes.

(32) Ibid, p. 17.
(33) Black, et al, (2008), 'Maternal and child undernutrition: global and regional exposures and health consequences' *The Lancet*, p. 15.

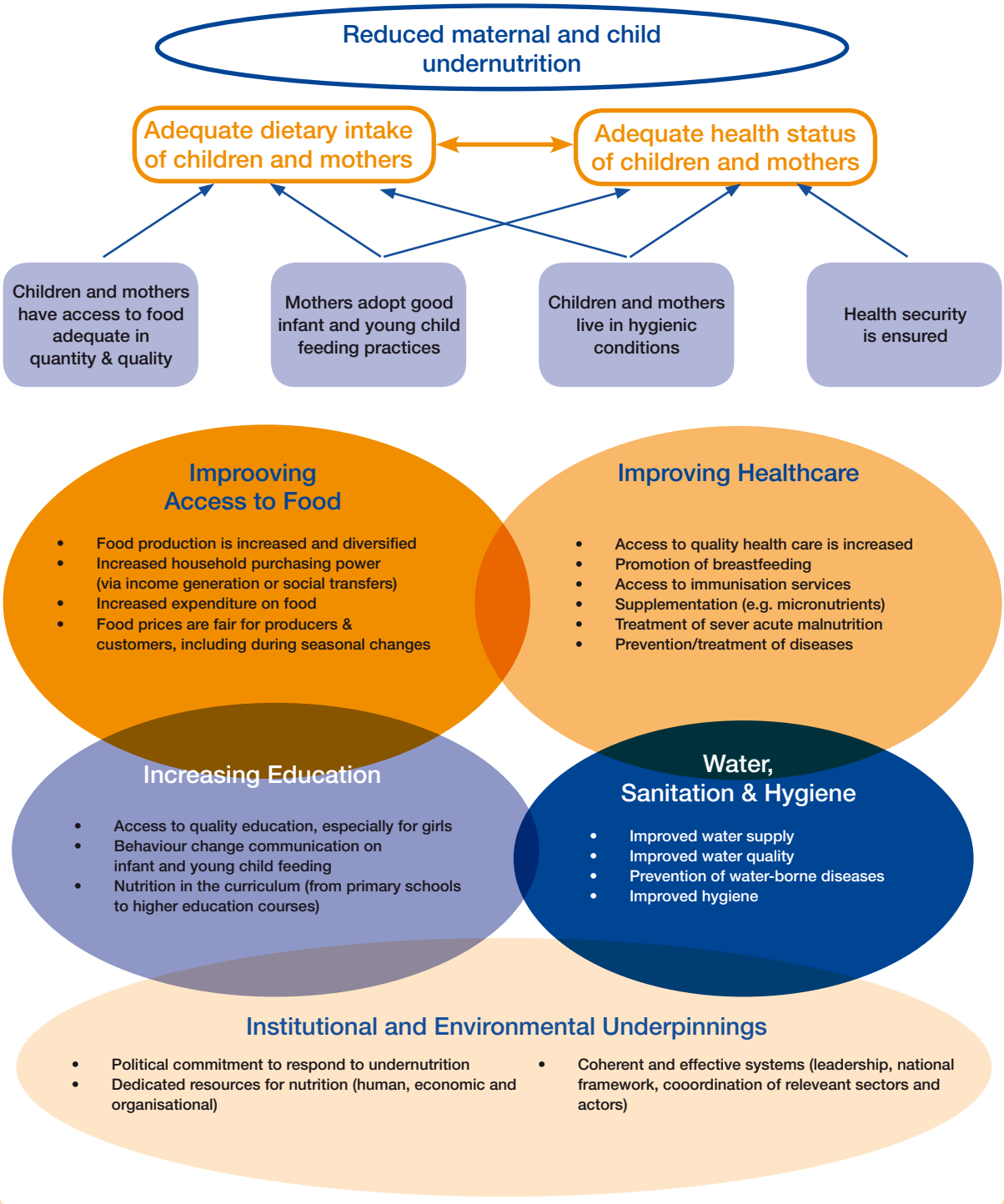
Figure 5: A model of the causal pathways leading to undernutrition



Source: Based on Unicef (1990), ***Strategy for Improved Nutrition of Children and Women in Developing Countries*** *and adapted in* ***The Lancet****'s Series (2008).*

Undernutrition can develop over short (acute) or long (chronic) periods of time. To tackle undernutrition, two broad approaches can be followed. Firstly, there are strategies and interventions that have a **direct** impact on nutritional status by tackling the *immediate causes* of undernutrition — such as, feeding programmes, provision of micronutrient supplements or support for infant feeding. Secondly, there are strategies and interventions that have an **indirect** impact on nutritional status by tackling the *underlying and basic causes* of undernutrition — by improving health status, sanitary conditions ([34]), access to more/better quality food, or increasing household income. Both approaches are generally necessary. **Figure 6** summarises different programming options that can contribute to reducing undernutrition.

Figure 6: Nutrition framework for action



(34) The distinction between direct and indirect interventions has been made previously, including in the EC's Concept note: *Enhancing EC's Contribution to Address Maternal and Child Undernutrition and its Causes*, January 2009 (http://ec.europa.eu/europeaid/infopoint/publications/europeaid/183a_fr.htm).

Multi-country evidence on tackling undernutrition

There is evidence from 63 countries on how different investments contribute to reducing underweight amongst children ([35]).

Underlying causes:

- 43% of the total reduction in undernutrition came from improvements in childcare as represented by women's education (female enrolment at school);
- 26% came from increases in per capita food availability;
- 19% came from improvements in the health environment (access to safe water); and
- 12% came from improvements in women's status ([36]) (female to male life expectancy).

Basic causes:

- 50% of the reduction in undernutrition came from increased per capita national income;
- 0% came from overall improvements in democracy, despite the potentially powerful influence that democracy can exert by giving people a voice in how government resources are allocated. Public accountability had generally not improved in the countries studied over the study period.

The study concludes that actions in sectors that are not the traditional focus of nutrition action can make significant achievements in reducing undernutrition. However, this requires more awareness of the roles these basic causes play in reducing undernutrition and political commitment to do so.

The following chapter demonstrates how different sectoral/thematic aspects of aid investment can tackle immediate, underlying or basic causes of undernutrition.

Sources of further information

- Danida (2009), 'Addressing the underlying and basic causes of child undernutrition in developing countries: what works and why', Evaluation Study 2009/2 (www.um.dk/NR/rdonlyres/8A1655B7-736C-4403-AE6A-9F7AAF3942F1/0/200902Nutritionfinaltilwww.pdf).
- DHS, Survey results (www.measuredhs.com/countries/start.cfm).
- FAO, Nutrition country profiles (www.fao.org/ag/agn/nutrition/profiles_by_country_en.stm#africa).
- MICS, Survey results (www.unicef.org/statistics/index_countrystats.html).
- Unicef (2009), Tracking progress on child and maternal nutrition: A survival and development priority (www.unicef.org/publications/index_51656.html).
- Unicef, The state of the world's children, Statistics (www.unicef.org/rightsite/sowc/statistics.php).
- WHO's Vitamin and Mineral Nutrition Information System includes country information. Iodine deficiency disorders (www.who.int/vmnis/iodine/data/en/);
- Anaemia (www.who.int/vmnis/anaemia/data/en/);
- Vitamin A deficiency (www.who.int/vmnis/vitamina/data/en/).
- World Bank, Health nutrition and population (HNP), Statistics (http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTHEALTHNUTRITIONANDPOPULATION/EXTDATASTATISTICSHNP/EXTHNPSTATS/0,,print:Y~isCURL:Y~contentMDK:21187239~menuPK:3342157~pagePK:64168445~piPK:64168309~theSitePK:3237118,00.html).
- World Bank, World development indicator database (http://ddp-ext.worldbank.org/ext/ddpreports/ViewSharedReport?&CF=&REPORT_ID=1336&REQUEST_TYPE=VIEWADVANCED).
- World Health Statistic (2009), Table 2: Cause-specific mortality and morbidity (www.who.int/whosis/whostat/).

(35) Smith and Haddad (2000), 'Explaining child malnutrition in developing countries: a cross-country analysis', *Research Reports*, No 111, International Food Policy Research Institute (www.ifpri.org/sites/default/files/publications/rr111.pdf).

(36) The low contribution of women's status, despite its potentially strong impact, was due to the potential not being realised because women's status had improved little over 1970–95 in the countries studied.

Chapter 2: Improving nutrition through key thematic areas

Source: Héloïse Troc

As discussed in the previous chapter, the causes of undernutrition are multi-sectoral and multi-layered (see **Figure 5**). Undernutrition will therefore only be tackled effectively if action is taken in all relevant sectors to address those causes that they can influence. Doing so would also result in several other benefits:

- improved relevance, efficiency and effectiveness;
- increased sustainability, equity and impact of poverty-reduction efforts;
- mitigated risks of social crises caused by nutrition-related stress (riots resulting from rising prices, hunger or displacement);
- less need for emergency aid, and lower social, economic and financial costs of crises, through preventive action; and
- stimulus to empower all citizens through capacity building for better nutrition integration. The benefits will be especially felt by poor people, women and indigenous groups, through fostering a culture of shared democracy, participation and rights awareness.

These expected benefits will only be realised if they are planned for and included in several thematic areas and sectors. In order to provide guidance that resonates with, and is practicable for, each of the EU-27 Member States, as well as the European Commission, this chapter has been structured to reflect the aspects of assistance areas under the European Consensus on Development ([37]) and the European Consensus on Humanitarian Aid ([38]).

Whichever thematic area or sector used, it is important to measure their contribution to combating undernutrition. There are a great many possible indicators, too many to list in this Reference Document. **Box 1** presents the most important indicators of nutritional impact, which may be valuable for a range of sectoral approaches. **Annex 3** provides additional options of indicators linked to inputs, outputs and outcomes. All indicators used in this Reference Document are derived from current internationally accepted standards ([39]).

The boxes at the end of each section below contain only those indicators of specific added value to nutrition. They are intended to complement the core/usual indicators for each sector/thematic area. Some indicators and entry points are valid for several sectors and are therefore repeated.

Box 1: Impact indicators potentially relevant to all aspects of external assistance
(See **Annex 3** for further details)

- Prevalence of stunting in children aged < 5 years
- Prevalence of underweight in children aged < 5 years
- Prevalence of wasting in children aged < 5 years
- Prevalence of severe acute malnutrition (including oedema) in children < 5 years
- Prevalence of low MUAC (6–59 months)
- Low birth weight rate (LBW)
- Prevalence of low body mass index in women of reproductive age
- Prevalence of overweight amongst women of reproductive age
- Prevalence of iodine deficiency disorders (IODD)
- Prevalence of children (2–5 years) suffering from vitamin A deficiency
- Prevalence of pregnant or lactating women suffering from vitamin A deficiency
- Prevalence of anaemia in children aged 6–59 months
- Prevalence of anaemia amongst pregnant women
- Maternal mortality ratio (per 100 000 live births)
- Infant mortality rate
- Under 5 mortality rate

(37) (2005), http://ec.europa.eu/development/icenter/repository/european_consensus_2005_en.pdf
(38) (2007), http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2008:025:0001:0012:EN:PDF
(39) WHO, et al. (2008), *Indicators for assessing infant and young child feeding practices* — Part 1 — Definitions; FAO/FANTA (2008), *Guidelines for measuring household and individual dietary diversity*; WHO (2010), *World Health Statistics* — Indicator compendium — Interim version; WHO (2010), *Nutrition Landscape Information System* — Country profiles — Interpretation Guide; Sphere (2011), *Humanitarian Charter and Minimum Standards in Humanitarian Response*.

2.1. Improving nutrition through health

The health sector plays an essential role for nutrition. The World Health Assembly adopted several resolutions ([40]) on infant and young child nutrition including the resolution ([41]) adopted in May 2010. The health sector contributes to nutrition by taking action to support child and maternal health and through a package of nutrition-specific actions such as breastfeeding promotion (see **Annex 4**), management of severe acute malnutrition and vitamin A supplementation.

Possible entry points for this aspect of undernutrition include:

- health policies — addressing disparities in access to comprehensive packages of nutrition interventions for women and young children;
- health information systems — incorporating nutrition indices in routine reports from health facilities and supervision/evaluation procedures. Community health diagnosis, national surveys (e.g. demographic household surveys (DHS), multiple indicator cluster surveys (MICS)) and surveillance — to include an analysis of the nutrition situation (nature, levels, distribution, trends, causes);
- primary healthcare — for early diagnosis and treatment of diseases and hence prevention of nutritional deterioration, community-based management of acute undernutrition (see the Malawi case study online, on scaling up the management of acute malnutrition and India case study on the Dular strategy in Chapter 2.9) screening for nutritional problems, nutrition campaigns, especially for pregnant and lactating women and children (e.g. iron-folate and vitamin A supplementation, hygiene promotion, deworming, zinc to manage diarrhoea, and the Behaviour Change Communication (BCC) concerning breastfeeding or complementary feeding) (see the Zimbabwe case study online, on breastfeeding promotion);
- tertiary healthcare (district and reference health facilities) — for treating cases of severe acute undernutrition and severe micronutrient deficiencies (e.g. severe anaemia with medical complications), nutrition supplementation for main prevalent diseases (HIV/AIDS, tuberculosis, diabetes, post-measles, endemic parasitic diseases) (see the Zimbabwe case study online, on HIV);
- vaccination campaigns and other special health events — to distribute vitamin A and/or other micronutrients, to screen and refer moderate and/or severe cases of undernutrition, to promote appropriate infant and young child feeding, to discuss constraints that impact on care practices and identify solutions;
- capacity development — raising awareness of undernutrition and building relevant skills amongst health staff at all levels, including nutrition modules in medical, nurse or health assistant training, creating capacity for community-based management of acute undernutrition (see the Burundi case study online, on capacity building);
- supply chain — including delivery and supply of nutritional products and materials, support local production of ready-to-use food products (see the Malawi case study online, on the management of acute malnutrition, and the India case study online, on the Dular Strategy);
- increasing collaboration with other sectors and exploiting synergies (e.g. establishing links with social protection services) (see the Peru case study in Chapter 4);
- promoting local production of specialised products that meet quality standards;
- advocacy and policy support — to incorporate nutrition into national strategies and plans, including emergency preparedness plans and poverty-reduction strategies.

Annex 5 contains a list of health interventions that have proved effective in improving nutrition. This list will need to be revised and expanded as further evidence becomes available. According to the 2008 *The Lancet*'s ([42]) Series on Maternal and child undernutrition, universal coverage with the full package of effective interventions 'could prevent about one quarter of child deaths under 36 months of age and reduce the prevalence of stunting at 36 months by about one third ([43])' in the 36 countries with 90% of stunted children. Scaling up these interventions to achieve a high and equitable coverage, and sustain it, remains a challenge in many countries. This is often due to insufficient human and financial resources and the low strategic priority given to nutrition.

The authors of the 2008 *The Lancet*'s Series on Maternal and child undernutrition also stress the need to 'exclude ineffective actions to avoid dilution of focus and the waste of human and financial resources'. 'Ineffective actions in this context refer to those that are unlikely to improve nutritional status or any of its underlying determinants.' Three interventions commonly implemented have been 'found to be ineffective as direct contributors to reducing undernutrition in mothers or young children: growth monitoring (unless linked to adequate nutrition counselling and referrals); preschool feeding programmes targeting children over 24 months; and school feeding programmes targeting children older than 5 years of age'.

(40) www.who.int/nutrition/topics/wha_nutrition_iycn/en/
(41) http://apps.who.int/gb/ebwha/pdf_files/WHA63/A63_R23-en.pdf
(42) *The Lancet* is the world's leading independent general medical journal. The journal's coverage is international in focus and extends to all aspects of human health.
(43) www.thelancet.com/journals/lancet/article/PIIS0140673607616936/fulltext

Box 2 lists only those indicators with specific added value to nutrition. They are intended to complement health indicators essential to nutrition such as vaccination coverage and antenatal care.

Box 2: Key indicators of nutrition benefits through health

(See also impact indicators in Box 1 and more information on indicators in **Annex 3**)

- Early initiation of breastfeeding
- Exclusive breastfeeding under 6 months
- Coverage of child vitamin A supplementation
- Post partum vitamin A supplementation
- Coverage of iron/folate supplementation during pregnancy
- Coverage of the treatment of severe acute malnutrition
- Adequate introduction of complementary food
- Minimum dietary diversity (6–23 months)
- Minimum acceptable diet (6–23 months)Prevalence of anaemia in children aged 6–59 months
- Prevalence of anaemia amongst pregnant women
- Maternal mortality ratio (per 100 000 live births)
- Infant mortality rate
- Under 5 mortality rate

For maximum effectiveness, nutrition-related action must be fully integrated into the health system, health strategy and health budget of a country.

2.2. Improving nutrition through water/sanitation/hygiene

Attaining the target of MDG7c — to halve the proportion of people without sustainable access to safe drinking water and basic sanitation — is critical to the attainment of the nutrition indicator of MDG 1. Sanitation, hygiene and water interventions primarily act to impact undernutrition by preventing diarrhoea and other enteric diseases (see the Zimbabwe case study online, on diarrhoeal disease research). The greatest nutritional gains in this area are likely to be made by investing in sanitation and hygiene promotion. A review of data from eight countries found that improvements in sanitation were associated with increases in height ranging from 0.8–1.9 cm ([44]).

Entry points for this aspect of undernutrition include:

- water/sanitation/hygiene policies and programmes;
- healthcare (primary healthcare or child health) and hygiene promotion;
- infrastructure (water treatment and delivery/distribution, sanitation, treatment of wastewater and reduction of pollution of water resources);
- rights to water and reducing inequalities in access to water (e.g. increase coverage of water distribution mechanisms, introduce technology that will increase access to water for poor households and reduce women's workload);
- regulations to ensure water providers meet standards (equitable pricing, water quality, efficiency);
- monitoring and evaluation systems that include nutrition-relevant indicators.

(44) Esrey, S., A. (1996), 'Water, waste and well-being — A multi-country study', *Am J Epidemiol*, vol. 43, No 6, pp. 608–623.

Box 3: Key indicators for nutrition benefits through water/sanitation/hygiene
(See also impact indicators given in Box 1 and more information on indicators in **Annex 3**)

- Availability of soap
- Use of improved drinking water sources
- Distance to the nearest water point
- Use of improved sanitation facilities

Water/sanitation programmes can improve nutrition (e.g. by prioritising areas where undernutrition and/or diarrhoeal diseases are highest), and should seek to measure the impact of interventions in terms of nutritional outcomes.

2.3. Improving nutrition through education

Chapter 1 highlights the importance of nutrition during early childhood for later educational attainment. The education sector also plays an essential role in reducing undernutrition in a sustainable, long-term and equitable manner. There is an inter-generational effect of undernutrition whereby improvements in women's education are linked to better nutritional outcomes for their children, by improving care practices, strengthening economic prospects and delaying the first pregnancy. Survey results show a much lower prevalence of undernutrition amongst children whose mothers attended secondary school compared with those with no schooling or primary education only. For instance, the risk of child stunting is about 2.5 times lower in Burundi, half in Laos and more than four times lower in Niger when the mother attended secondary school compared with no schooling ([45]).

Possible entry points for this aspect of undernutrition include:

- curriculum — introducing nutrition and growth, family planning, pregnancy and infant feeding and hygiene promotion into existing programmes;
- teacher training — on enhanced curricula;
- enrolment — promoting enrolment and improving attendance, especially for girls;
- school management — incorporating health and nutrition services in schools' calendars, such as immunisation campaigns, deworming, family planning, ensuring adequate facilities (e.g. sanitation);
- community-based approaches — using children or civil society groups to promote appropriate nutrition practices at household and local levels.

School feeding programmes have been popular solutions in an attempt to improve health, growth and educational performance. However, evidence ([46]) indicates that these programmes have a limited impact on nutrition. For this reason, the often substantial investments in school feeding under nutrition budget lines are frequently criticised for their nutrition outcomes. Moreover, food provided under these schemes is not targeted at the crucial window of opportunity for intervention i.e. from conception to 2 years of age.

Box 4: Key indicators for nutrition benefits through education
(See also impact indicators in Box 1 and more information on indicators in **Annex 3**)

- Girls' school attendance and academic attainment (e.g. secondary school net attendance ratio for girls, literacy rate among young women)
- Nutrition in the curriculum

Education programmes that seek to improve long-term nutrition should address the proven benefits of policies that promote the enrolment and education of girls.

(45) *Source*: MICS surveys (2006) (www.childinfo.org/mics3_surveys.html).

(46) Kristjansson, B., et al. (2006), 'School feeding for improving the physical and psychosocial health of disadvantaged students', *Campbell Systematic Reviews*. See also: Galloway, R., et al. (2009), 'School feeding: outcomes and costs', *Food and Nutrition Bulletin*, vol. 30, No 2.

2.4. Improving nutrition through gender

Gender analysis focuses on the different roles and responsibilities of women and men and how they affect society, culture, the economy and politics. Such analyses find that women have disproportionately less access to, and control of, resources than men. Women are too often marginalised in their families and communities, suffering from a lack of access to credit, land, education, decision-making power and rights to work.

Nutrition is intricately linked to women's biological, economic and social roles, influencing their own and their children's nutritional status. Women are the main care providers for infants and young children, therefore ensuring women have the means and time to breastfeed and provide adequate care is essential to reducing undernutrition. As economic actors, women contribute to household food security and livelihoods (see the Asia case study online, on homestead production). Gender-balanced access to opportunities and control over resources benefit the nutrition status of the entire family.

Possible entry points for this aspect of undernutrition include:

- prioritising women's nutrition in maternal and reproductive health policies;
- incorporating a gender dimension in agricultural policies to enhance nutrition outcomes;
- improving female access to education;
- gender-sensitive social protection policies (e.g. targeting support to pregnant and lactating women to relieve their economic burden during the later stages of pregnancy and the breastfeeding period, or providing childcare support to enable women to work);
- legal frameworks which protect women's rights (e.g. land inheritance rights, workplace policies supporting breastfeeding);
- reducing the time burden on women by improving infrastructure (such as feeder roads to markets, health facilities or water systems closer to communities) (see the Laos case study online, on analysis).

Box 5: Key indicators of nutrition benefits through gender
(See also impact indicators given in Box 1 and more information on indicators in **Annex 3**)

- Individual dietary diversity score among women of childbearing age
- Girls' school attendance and academic attainment (e.g. secondary school net attendance ratio for girls, literacy rate among young women)
- Adolescent fertility rate

The social position and empowerment of women is crucial to underpin nutritional success. Furthermore, recent analyses highlight the critical importance of investing in women's nutrition to achieve lasting benefits across the generations.

2.5. Improving nutrition through social protection

Social protection policies or programmes are developed in response to levels of vulnerability, risk and deprivation. Of the many social protection measures (such as legal frameworks to protect citizens' rights or health insurance), there is increasing evidence — from Brazil, Malawi, Mexico, Nicaragua, South Africa, for instance — that social transfers can play a significant role in reducing undernutrition (see Mexico case study below and that from Peru in Chapter 4; and the Brazil case study online). Social transfers are non-contributory ([47]), publicly-funded, direct, regular and predictable resource transfers (in cash or in kind) to poor and vulnerable individuals or households. Their aim is to reduce their deficits in consumption, protect them from shocks (including economic and climatic), and, in some cases, boost their productive capacity.

Social transfer schemes can help reduce undernutrition in several ways.

First, they can be a tool to reduce inequalities and address economic income poverty at household level. This is of paramount importance as undernutrition and poverty tend to be closely interrelated. By addressing income poverty and the economic determinants of undernutrition, social transfers can have an impact on the three underlying causes: increasing access to food and dietary diversity, improving quality of care for women and children, and increasing access to healthcare.

Second, these schemes can be a means to deliver 'nutrition-specific' action, such as the distribution of food supplements to pregnant/lactating women and young children.

Third, they can help establish links to other services — health in particular — needed to improve the nutritional status of women and young children. The transfer can be on condition that recipients (especially women) attend health centres, as is often the case in Latin America.

The 2008 *The Lancet*'s Series on Maternal and child undernutrition concluded that conditional cash transfers can be effective ([48]) in helping improve nutrition (see **Annex 5**).

Possible entry points include:

- prioritising maternal and child benefits;
- prioritising areas or populations worst affected by undernutrition and addressing disparities;
- adapting the design of social transfers, e.g. exemption from labour requirements for pregnant and lactating women (see the Ethiopia case study online, on the productive safety net programme) or by rapid disbursement of cash/vouchers in emergencies (see Niger case study on cash transfer in a context of a food crisis, in Chapter 4);
- establishing links with other programmes and services (e.g. health) by encouraging attendance or considering setting a condition for the transfer that requires service attendance;
- adapting the nature of the social transfer, e.g. providing food supplements as well as cash;
- taking into account households' purchasing power and the cost of a balanced diet when setting the amount of the transfer.

(47) A non-contributory scheme is one into which the eventual beneficiary is not required to make a direct personal financial contribution.
(48) *The Lancet*'s Series qualified its conclusion to 'specific contexts' since most examples reviewed were from Latin America.

Mexico: The Oportunidades programme [49]

Mexico's Oportunidades (formerly called Progresa) is an example of a multi-sector poverty alleviation programme that has had a successful impact on undernutrition. Its main objective is to develop human capital by improving education, health and nutrition for its population.

Started in 1997, the programme initially served 300 000 households in 11 rural states. By 2007, coverage reached over 5 million households from all 31 of Mexico's states, with a total budget of USD 3.7 billion.

Progresa was initially financed by domestic funds but later attracted international funding.

The nutrition component of Oportunidades includes a cash transfer to women equivalent to 20% of average monthly household expenditure. Women receive the cash payment on condition that they attend health services. The latter were reinforced by the programme and include health/nutrition education sessions. In addition, the programme provides fortified food supplements to pregnant and lactating women, children aged 6–23 months and children 24–60 months with a low weight for their age.

An evaluation conducted in 2008 examined the impact of the programme over its first 10 years. In general, the prevalence of stunting fell significantly in the seven states assessed from 1998, on average falling by 10 percentage points (p. 110). However, stunting persisted in all of the states, with a higher prevalence in the south of the country (36.3%), among indigenous populations (33%), highly marginalised and very highly marginalised (37.2%) communities and among the poorest households (32% versus 14.1% in the least poor).

The prevalence of anaemia among beneficiary children in 2007 (35.8%) was nearly half that reported in 1999 (61.0%), although a similar reduction was also observed among non-beneficiary children (64.7% in 1999 and 35.2% in 2007). However, an earlier evaluation of the programme, conducted between 1997 and 1999, showed that children who benefited from Progresa, compared with the control group that entered the programme one to two years later, had a lower incidence of anaemia by over 10%.

All of the analyses demonstrate a strong association between economic well-being and the prevalence of stunting and anaemia. However, some of the most important likely direct causes of undernutrition among children — specifically inadequate breast-feeding and complementary feeding practices — continue to be a challenge. For example, over 50% of children aged below 2 years were introduced very early on (at one month of age) to liquids and milks other than breast milk.

The evaluation discovered that the supplement targeting young children (6–24months) did not have the desired impact because other family members were consuming much of it instead.

Oportunidades is widely considered a successful model and it has been replicated and adapted in several Latin American countries. A key characteristic of the conditional cash transfers is that they aim to address both the immediate and long-term aspects of poverty. For instance, by tackling maternal undernutrition and stunting amongst children under the age of 2, they aim to break the intergenerational cycle of malnutrition.

The box below contains only indicators that have specific added value to nutrition. They are intended to complement social protection indicators essential to nutrition such as indicators of purchasing power (context-specific) and households' ability to cover basic needs (e.g. ability to cover the cost of a balanced diet).

Box 6: Key indicators of nutrition benefits through social protection

(See also impact indicators given in Box 1 and more information on indicators in **Annex 3**)

- Minimum dietary diversity (6–23 months)
- Minimum acceptable diet (6–23 months)
- Individual dietary diversity score (women of reproductive age)
- Breastfeeding is continued throughout the first 12 months of life

[49] *Sources*: 'External Evaluation of Oportunidades 2008, 1997–2007: 10 years of intervention in rural areas', ***Executive Synthesis***, Secretaría de Desarrollo Social Coordinación Nacional del Programa de Desarrollo Humano Oportunidades, 2008. Skoufias, E. (2005), ***Progresa and its impacts on the welfare of rural households in Mexico***, IFPRI; and Basset, L. (2008), ***Can conditional cash transfer programs play a greater role in reducing child undernutrition***, World Bank.

Social transfers and social protection measures provide essential support to poor and vulnerable individuals and households. They are therefore an effective means of reaching the groups most likely to be suffering from, or at risk of, undernutrition.

2.6. Improving nutrition through food security

Food security is defined as a situation when

'all people at all times have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.' ([50])

This implies the need to consider food security beyond national and household levels and understand the situation and constraints faced by individuals.

Entry points for this aspect of undernutrition are relevant in emergency and development contexts and include:

Policies and governance:

- promoting comprehensive policy frameworks to tackle undernutrition and hunger;
- including nutrition objectives and indicators (e.g. food intake/diet quality and anthropometry) in monitoring and evaluation systems for policies, programmes and projects (see the Mali case study on online —Applying a nutrition lens to food security projects);
- including nutrition-related indicators in food security information systems and early warning systems;
- food policy reforms (subsidies, prices, trade, agriculture-sector investments) and pro-poor policies designed to address disparities in a sustainable manner.

Social and economic measures:

- cash and other social transfers (including food) to increase access to food including in emergencies, see possible entry points for social protection, paragraph 2.5 and Niger case study — Cash transfer in a context of a food crisis (in Chapter 4), see also Kenya case study — An integrated programme to improve diet, food security and livelihoods (below);
- income generation and improving access to financial services for the poor;
- equitable access to labour opportunities for poor households (e.g. establishment and enforcement of legal frameworks that protect the poor in labour markets, support for alternative forms of employment);
- empowerment of women as key agents to improve household food security, health and nutrition outcomes;
- agriculture (see possible contributions for agriculture, paragraph 2.7);
- natural resources management (see possible contributions for natural resources management, paragraph 2.8);
- market interventions — facilitating physical and/or economic access (including investments in rural infrastructure such as feeder roads);
- equitable access to productive assets (e.g. livestock, means of transport);
- improving community resilience against future shocks through asset creation and better early warning systems;
- promoting local production of specialised products that meet quality standards.

Although food security programmes can have significant nutritional benefits, they usually achieve better results, in particular for children, when combined with action addressing other determinants of child nutrition (like maternal health and care-giving practices) (see the Bangladesh case study online — A nutrition-focused livelihood project). Whatever strategy is chosen, attention needs to be paid to the potential negative side effects of food security programmes on nutritional status — especially where women are targeted and yet are also expected to be the primary carers for young children. This highlights the need for a robust situation analysis and on-going monitoring to make informed decisions on interventions. Corrective measures can be incorporated to overcome obstacles, such as providing time and space for breastfeeding in public works or agricultural programmes; or distributing impregnated bed nets alongside surface irrigation schemes to prevent increased malaria.

See list of key indicators of nutrition benefits through food security and agriculture in **Box 7** below.

Food security programmes need to consistently measure nutritional outcomes and identify actions that work according to context.

(50) World Food Summit Plan of Action, 1996.

Kenya: An integrated programme to improve diet, food security and livelihoods

In the North Eastern Province of Kenya, increasing climatic hazards, coupled with conflicts and displacement, have a devastating impact on local livelihoods. Destitute herders that have lost their animals turn to casual labour or petty trading like the collection of firewood to eke out their living. These dramatic changes result in loss of direct access to animal products, lower purchasing power and thus have a serious impact on family diets.

In such context two NGOs with specific expertise and longstanding experience in the region (Vétérinaires Sans Frontières, on pastoralism and markets, and Save the Children, on nutrition and voucher systems) combined their efforts. A series of initial assessments into milk market, household economy, malnutrition causes and restocking initiatives led to designing an integrated programme that brought together nutrition, health, food security and rural development.

The aim was to diversify vulnerable children's diets through a voucher system while also effectively supporting the local economy. The vouchers were exchangeable for milk, meat products, as well as beans, in local markets.

The overall programme design built on other existing initiatives that complemented the voucher system (fodder production, regional market support, etc.) and included support to line ministries activities (Ministry of Arid Lands, Ministry of Health).

Overall the programme succeeded in:

(a) **increasing direct consumption of protein-rich food** amongst vulnerable households and their children through vouchers, combined nutrition education, training in child feeding and care practices;

(b) **supporting the local economy** by increasing the income pastoral households could generate through animal products sale, and through direct support to their production and marketing systems (training on milk management, husbandry, support to animal health services, enhanced fodder production, etc.);

(c) **improving the overall availability and quality of animal products in local markets** which contributed, amongst others, to extend the shelf life and the hygiene conditions of safer milk products, thus improving also the economic returns of traders (including women traders).

Source: This case study is based on the final impact evaluation of the livelihood element of the ECHO funded Reducing the Impact of Drought (RID) programme.

2.7. Improving nutrition through agriculture

In addition to its traditional focus on food and cash-crop production, agriculture holds considerable potential to help achieve broader national objectives of reducing poverty and undernutrition. By putting more focus on nutrition outcomes, agriculture will address a critical, recurring, constraint: low labour capacity and productivity due, in part, to the poor health/nutrition status of the agricultural workforce.

Agriculture can improve nutrition in several ways:

- improved diet (quantity and quality) — by increasing household consumption of own food produced and diversifying production;
- reduced income poverty — by selling own produce or agricultural labour/employment — with a potential knock-on effect on the quality of the diet, access to health services and care;
- empowerment of women as income-earners, decision-makers and primary childcare-providers;
- lower food prices for consumers through increased food production and availability;
- higher national revenue, which can be used to improve state services.

Despite the above, the impact of agricultural policies and programmes on nutrition is not always clear. First, agricultural programmes are not necessarily designed with a nutrition objective in mind and hence are not assessed by that criterion. Second, even those that do have nutrition objectives tend to have mixed results. However, evidence ([51]) shows that interventions promoting increased production of fruit and vegetables (homestead gardens in particular) and animal

(51) World Bank, From Agriculture to Nutrition — Pathways, Synergies, and Outcomes, 2007.

food products ([52]) have considerable potential to address micronutrient deficiencies — not least because such programmes are more likely to include nutrition objectives. This evidence shows gains in production, income, household food security, dietary intake and fewer micronutrient deficiencies as a result of the interventions, especially when combined with other components — education, behaviour change and women's empowerment. Nevertheless, the potential benefits of agricultural programmes that focus on the production of energy-rich staples are also very likely to help reduce undernutrition (such as maternal undernutrition) although there is yet no evidence of this.

Possible entry points for this aspect of undernutrition include:

Policies and programmes:

- explicitly incorporating nutrition objectives in policies and programmes;
- designing strong monitoring and evaluation systems and reporting on nutrition and food intake/diet quality indicators in addition to production figures and staple food availability;
- increasing collaboration with other sectors and joint programming (e.g. establishing links between agricultural extension and health services for activities such as communication and information systems). This is especially important in emergencies;
- empowering women, strengthening their roles as economic actors and creating an enabling environment for childcare;
- prioritising areas or groups (e.g. smallholders or agricultural labourers) worst affected by undernutrition;
- controlling potential negative impacts on nutrition (e.g. increase in food-borne or water-borne diseases, or in women's workload to the detriment of childcare).

Conducive natural resource management:

- securing access to land (e.g. land use rights) and other productive resources (e.g. water) for poor or marginalised groups (e.g. ethnic minorities, emergency-affected populations, pastoralists depending on the context);
- adaptation to the effects of climate change (e.g. to the foreseen reduction in water availability in sub-Saharan Africa);
- risk mitigation and management of climatic shocks and natural hazards (e.g. droughts, floods, pests).

Conducive investments and services:

- facilitate equitable access to financial services for smallholders, including the poor;
- increasing investment for the production and consumption of fruit and vegetables (micronutrient-rich plants) alongside staple crops (see the Asia case study online — Diversifying diets through homestead production, and Asia case study — Counting on beans for nutrition);
- increasing household access to and consumption of animal products through strategic support to the livestock and fishery sectors (e.g. facilitating access to milk for households who do not own cattle, increasing livestock ownership while ensuring environmental sustainability. See the east Africa case study online — The impact of fodder trees on milk production and income);
- increasing the productivity of small-scale farming through good agricultural practice (e.g. improving soil fertility, control of soil erosion, water conservation);
- supporting storage and processing methods to reduce post-harvest losses and increase profit margins;
- fortifying basic foods, including bio-fortification (e.g. bio-fortification of sweet potatoes in vitamin A. See the Nigeria case study online — Public–private partnership in fortification programmes).

Box 7 contains only indicators that have specific added value to nutrition. They are intended to complement household level food security and agriculture indicators essential to nutrition, such as indicators of purchasing power (context-specific), proportion of food needs met through own production or the proportion of expenditure on food.

(52) Animal products are an excellent source of protein and micronutrients. Micronutrients tend to be more easily absorbed by the human body when they come from an animal source than from plants.

Box 7: Key indicators of nutrition benefits through food security and agriculture
(See also impact indicators in Box 1 and more information on indicators in **Annex 3**)

- Minimum dietary diversity (6–23 months)
- Individual dietary diversity score (women of reproductive age)
- Consumption of iron-rich or iron-fortified foods (6–23 months)
- Minimum acceptable diet (6–23 months)
- Iodisation of salt

Agriculture can and should be an effective way to improve nutrition. The sector should therefore consistently incorporate nutrition indicators in programme design, and nutrition criteria in evaluations. Regardless of the specific entry point, nutrition training and awareness-raising is necessary for agricultural workers and decision-makers to understand the links and work towards achieving them.

2.8. The environment and sustainable management of natural resources

Environmental changes (e.g. urbanisation, loss of natural resources and biological diversity) affect key determinants of nutrition wellbeing. For instance, climate change with its higher frequency and severity of extreme weather events (e.g. droughts, floods) alters:

- access to food which is imperilled by droughts, water scarcity and floods. According to IFPRI, '*by 2050, the decline in calorie availability will increase child malnutrition by 20% relative to a world with no climate change*' ([53]);
- health status with diarrhoeal diseases is expected to increase and some infections likely to spread to new areas.

These changes will particularly affect those who are less able to adapt, threatening already strained livelihoods, deepening poverty and increasing undernutrition. It is essential that action prioritises those most affected by undernutrition: women, young children and the poorest households.

Moreover, 'the nutritional status of populations, as a recognisable and measurable outcome, should help direct other scientific disciplines and intervention programmes in identifying sustainable solutions to the environmental and economic problems facing global communities.' ([54])

Possible entry points for this aspect of undernutrition include:

- restoring or enhancing natural resources (e.g. rangeland rehabilitation, re-vegetation of stream banks);
- securing ownership, access and management rights to land (e.g. forests, rangelands) and other productive resources for poor or marginalised groups (e.g. ethnic minorities, emergency-affected populations);
- pro-poor, efficient and integrated management of water resources including controlling for potential negative impacts, such as an increase in water-borne diseases;
- risk mitigation and management of water-related shocks (e.g. droughts, floods, extreme forms of water insecurity) through adequate infrastructure — storage and flood control, for instance;
- supporting adaptation to the effects of environmental changes (e.g. climate change);
- strengthening early warning and nutrition surveillance systems;
- increasing collaboration with other sectors and joint programming to increase households and communities' resilience. This is especially important in emergencies;
- monitoring and evaluation systems including nutrition relevant indicators.

Box 8 contains only indicators that have specific added value to nutrition.

(53) Nelson, et al. (2009), Climate change impact on agriculture and costs of adaptation, IFPRI.
(54) Johns, et al. (2002), A foundation for development — Nutrition and the environment, SCN.

Box 8: Key indicators of nutrition benefits through environment and the sustainable management of natural resources

(See more details on indicators in **Annex 3**)

- Minimum dietary diversity (6–23 months)
- Minimum acceptable diet (6–23 months)
- Individual dietary diversity score (women of reproductive age)

2.9. Improving nutrition through governance

Governance denotes the rules, processes and behaviour by which interests are articulated, resources are managed and power is exercised in a society and the state's capacity and will to serve its citizens. Governance programmes tend to address public functions, public resource management and the exercise of public regulatory powers, democratic control and participation.

Regarding nutrition, the power and voice of poor people, and the state's accountability towards them, are important aspects of the environment where nutrition improvements are being sought. Quantitative and qualitative methods are required to identify and learn whether institutional and governance arrangements can improve the capacity, responsiveness and accountability of the state and civil society to generate improved nutrition outcomes.

Poor governance is often associated with a state's failure to meet the fundamental rights of its citizens, including nutrition (see Section 2.10). It constitutes a major impediment to development, as it limits the choice of aid modalities that donors can responsibly apply (budget support programmes are precluded in nations with poor governance indicators).

The increasingly prominent role played by the private sector in nutrition is recognised. This ranges from concerns about marketing practices linked to infant feeding through their role in transport and logistics to current debates on food processing and new products.

Entry points for this aspect of undernutrition include:

- information and transparency — ensuring access to nutrition information ([55]) in public affairs, strengthening food and nutrition surveillance systems;
- civil society inclusion — participation of civil society in planning nutrition strategies;
- budget — monitoring expenditure likely to yield nutrition benefits;
- national policies — including nutrition objectives and indicators in national strategies and policies, developing national action plans on nutrition, nutrition incorporated in national emergency plans, attention to governance, government leadership and institutional arrangements concerning nutrition strategies/plans;
- international instruments establishing the right to adequate nutrition as a basic human right ([56]);
- accountability of the state to fulfil their responsibilities and promises;
- improving the implementation of the International Code on Marketing of Breast-Milk Substitutes ([57]);
- coordination with civil society, international and private sector organisations (e.g. assess the private partners' comparative advantage and make it available to local actors, identify effective nutrition champions in different stakeholder groups);
- carrying out research and testing that new products meet European standards.

(See India case study below)

(55) Nutrition information can be highly politicised or politically charged.

(56) The Charter of the UN, the International Covenant of Economic, Social and Cultural Rights, the Convention of the Elimination of Discrimination against Women, and the Convention on the Rights of the Child.

(57) www.who.int/nutrition/publications/code_english.pdf

India: Governance as a critical determinant in managing undernutrition

India is home to a third of the world's stunted children, despite its impressive economic growth over the last quarter of a century. It is an 'economic powerhouse and a nutritional weakling' — a contradiction largely explained by a failure of governance at many levels. Indeed, the weak link between growth and nutrition is the very definition of weak nutrition governance.

Economic wealth has not been translated to nutritional health, largely due to government practices: prioritising social inputs rather than outputs, and excluding large groups of the population (especially low-caste groups, women and girls) from quality social services. Existing nutritional services are largely ineffective. Features of weak nutrition governance are a poor capacity to deliver the right services at the right time to the right populations, an inability to respond to citizens' needs and weak accountability at local level.

There is fresh political will to tackle the 'curse' of undernutrition, and the government of India has committed to increase resources for its Integrated Child Development Scheme. Though such investments are clearly necessary, they are unlikely to be sufficient to yield sustained progress. Resources alone will not tackle undernutrition in India. Evidence shows a weak link between levels of undernutrition and public spending on nutrition.

Different states in India have very different performances in terms of reducing undernutrition. The states making the greatest progress also show: (a) greater responsiveness, in terms of poverty reduction, to economic growth; (b) better state service delivery; and (c) electoral balance of power (accountability).

In addition, within states there are increasing welfare disparities, often along caste lines, which further undermine nutritional progress (and make it difficult to interpret state average rates of undernutrition). Excluding marginalised groups from quality services has a strong and persistently negative impact on the nutritional status of children. Such disparities need to be addressed by making fundamental political changes. Failing this, health and nutrition investments will have only limited impact.

The experience of India identifies several changes that should be made to the supply and demand for services since both contribute to undernutrition. On the supply side, changes include improved outreach methods to tackle exclusion, better staffing levels at key service delivery centres and stronger institutional (government) coherence promoting inter-sectoral cohesion. On the demand side, social audits (where state (e.g. local government) and civil society work in partnership to monitor and evaluate the planning and implementation of a programme) have been used to improve the accountability of local government to citizens (though no effort to estimate the impact on nutrition has yet been made).

A useful model of governance highlights three components: capacity, responsiveness and accountability. To improve nutrition governance in India, these components are used to argue for the following changes.

- Capacity: put and keep nutrition on the national political agenda; promote and coordinate cross-departmental work to tackle undernutrition.
- Responsiveness: use monitoring/evaluation/audit results to tune services more closely to the needs of target groups. Establish operational standards for services and audit performance in nutrition against these standards.
- Accountability: bottom-up systems for demanding rights and holding service-delivery institutions and groups accountable (which can also require building the capacity of these institutions and groups to deliver on their obligations).

The case for improved governance in nutrition also holds for international actors. Donors, for example, can make more of opportunities to improve nutrition through indirect measures (say in agriculture, social protection or health). The international community also needs to come together to agree on a vision, messages and roles to create momentum on advocacy on undernutrition that brings together the elites in rich and poor countries alike.

Finally, in order to lift the curse of undernutrition, a new research agenda is needed on nutrition governance. This would use disciplines that are sensitive to power, voice and accountability to identify and understand whether innovation in institutional and governance arrangements can improve the capacity, responsiveness and accountability of the state and civil society to generate improved nutrition outcomes.

Source: Case study prepared by the authors, abridged from the introductory article by Lawrence Haddad in: Lifting the Curse: Overcoming Persistent Undernutrition in India. ***IDS Bulletin*** *40(4), July 2009. DFID was one of the co-funders of this IDS Bulletin.*

Box 9: Key indicators for nutrition benefits through governance
(See more information on indicators in **Annex 3**)

- Inclusion/prioritisation of nutrition in national framework (e.g. poverty reduction strategy papers)
- Nutrition objectives included in sector policies/strategies/plans (e.g. health, contingency plan)
- Nutrition governance (including a system for inter-sectoral and stakeholder coordination, existence and status of nutrition strategy/policy/plan)
- Availability of training in nutrition for government workers (beyond health)
- Violations of the code on marketing of breast-milk substitutes monitored and reported
- Human rights indicators (See Box 10)

Community participation in governance processes, and accountability mechanisms between the government and its citizens, are key to underpin governance programmes linked to nutrition.

2.10. Improving nutrition through human rights

There is a body of international human rights law made up of individual instruments. States have ratified some or all of these instruments and thus have the primary duty to respect, protect and fulfil the rights of their citizens. The willingness of the state to prioritise this duty is crucial to being able to realise rights.

Non-state actors may also be significant duty-bearers, especially in situations where they hold territorial control and become the *de facto* government. However, even in such circumstances, their duties are not clear-cut, especially where territorial control is partial and/or shifting.

All states have a responsibility not to take actions that may lead to increased levels of hunger, food insecurity and undernutrition. Furthermore, it can be argued that states have also committed, to the maximum of available resources, to invest in the eradication of hunger. Governments must also protect citizens from the actions of others that might violate their human rights. Furthermore, states have acknowledged the essential role of international cooperation and assistance.

Entry points for this aspect of undernutrition include ([58]):

- right to food ([59]) — *the right to food is, above all, the right to be able to feed oneself in dignity* ([60]);
- employment rights — non-discrimination and fair pay in employment legislation and practices;
- children's rights — including the right to adequate food, health and shelter;
- women's rights;
- non-discrimination in the context of the right to food or access to health and nutrition services;
- refugee and humanitarian law in protracted crises;
- land rights regarding marginalised groups and women in particular;
- water rights, with a specific focus on poor households and women;
- human rights monitoring/reporting to the treaty bodies — reports may reveal discrimination against groups failures by duty-bearers;
- support to human rights office within government.

(58) Guidance on entry points can be found in the Voluntary Guidelines to support the progressive realisation of the right to adequate food in the context of national food security (FAO, 2004) (www.fao.org/docrep/meeting/009/y9825e/y9825e00.HTM).

(59) The FAO has put together a *Methodological Toolbox on the Right to Food* which includes: 1. Guide on legislating for the right to food; 2. Methods to monitor the human right to adequate food — vol. I and Methods to monitor the human right to adequate food — vol. II; 3. Guide to conducting a right to food assessment; 4. Right to food curriculum outline; 5. Budget work to advance the right to food. (www.fao.org/righttofood/publi_02_en.htm).

(60) Paragraph 5 of the Preliminary Study of the Human Rights Council Advisory Committee on discrimination in the context of the right to food, Human Rights Council, 22 February 2010.

Box 10: Key indicators for nutrition benefits through human rights
(See more information on indicators in **Annex 3**)

- Right to food included in the scope of the work of human rights offices
- Land rights (e.g. women, marginalised groups)
- Human rights, including food, health, employment, etc. promoted at community level

Human rights discourse tends to emphasise social and political rights but in fact basic needs are also enshrined in international law and affect the living conditions of the world's poorest populations. Those rights must also be emphasised.

Sources of further information

- The Lancet's Series: www.thelancet.com/series/maternal-and-child-undernutrition#
- Publications on infant and young child feeding: www.who.int/nutrition/publications/infantfeeding/en/
- Publications on breastfeeding: www.who.int/nutrition/topics/exclusive_breastfeeding/en/
- Publications on severe acute malnutrition: www.who.int/nutrition/topics/malnutrition/en/
- Publications on the reduction of micronutrient malnutrition: www.who.int/vmnis/publications/en/
- Publications on water, sanitation and hygiene: www.who.int/water_sanitation_health/en/
- Right to food: www.fao.org/righttofood/publi_02_en.htm
- Save the Children (2009), Lasting benefits — The role of cash transfers in tackling mortality (www.savethechildren.org.uk/en/docs/Lasting_Benefits_low_res_comp_revd.pdf).
- World Bank, (2010), Scaling Up Nutrition — What will it cost?; and (2010), Scaling Up Nutrition — A framework for Action (http://siteresources.worldbank.org/HEALTHNUTRITIONANDPOPULATION/Resources/Peer-Reviewed-Publications/ScalingUpNutrition.pdf).
- World Bank (2008), 'Can conditional cash transfer programs play a greater role in reducing child undernutrition?', SP Discussion Paper, No 0835 (http://siteresources.worldbank.org/SOCIALPROTECTION/Resources/SP-Discussion-papers/Safety-Nets-DP/0835.pdf).
- World Bank (2007), From Agriculture to Nutrition — Pathways, Synergies, and Outcomes (http://siteresources.worldbank.org/INTARD/825826-1111134598204/21608903/January2008Final.pdf).

Chapter 3: Integrating nutrition in the programming phases

Strategies to combat undernutrition have been established as priorities in order to confront major global challenges [61]**.**

Chapter 1 underscores the multiple avenues that can cause undernutrition, and Chapter 2 highlights the specific contribution that different sectors or thematic areas can make to combating it. Undernutrition needs to be understood, therefore, as a multi-sectoral concern that requires a multi-sectoral response. But, such breadth means that it is not always clear how nutrition should be overseen and managed by governments as there is no consistent institutional 'home' for it. Coherence, therefore, is built through strong and senior government leadership (see Section 3.1.2), which can oversee and coordinate the work of individual line ministries and departments. Donor support is undoubtedly critical to the success of such efforts.

3.1. Analysing and understanding undernutrition in context

This section provides guidance on assessing the causes of undernutrition in a specific context so that programmes can be designed or enhanced to address them specifically. The focus is on approaches to address undernutrition within a country. However, it could also be appropriate to consider approaches that cut across national borders (see Sahel case study online — The added value of a subregional approach to nutrition, food security and public policies) to demonstrate the added value of taking a regional approach.

3.1.1. Is there a problem of undernutrition?

The various causes of undernutrition can work at individual, household, community and environmental levels (see **Figure 5**). In each context, the relative importance of these causes needs to be clearly understood, including the chain of cause-and-effects that leads to undernutrition. This requires pooling information from different sectors and stakeholders to consider how different causal routes conspire to produce undernutrition — whether chronic or acute — in young children and their mothers. In all likelihood, reaching a shared understanding will require a process of discussion; the stronger the information base that feeds into these discussions, the clearer the parameters will be for agreeing on the causal chain behind undernutrition.

A preliminary judgement on whether a full nutrition situation analysis is necessary can be made using existing information as well as discussions with key stakeholders. Health and food security information systems are likely to be important sources of information, together with any existing nutrition-specific data.

Qualitative information may also provide insights into behavioural or poverty-related factors that contribute to undernutrition, such as anthropological studies, food economy analyses or socioeconomic assessments. Where feasible, understanding the perspective of community groups can provide valuable insights into the constraints faced by families on a day-to-day basis that may have an impact on nutrition. Local civil society groups or women's organisations may be helpful in this.

Furthermore, changes over time can reveal links between deteriorating nutrition and possible causal factors such as production failures, ecosystem degradation, price rises, changes in water supply management, disease outbreaks (whether seasonal or not) or significant changes in the local economy (such as employment opportunities or savings schemes). A rapid deterioration could point to an emerging humanitarian crisis; a slower, endemic, problem could require longer-term redress.

These different information sources will reveal different aspects of the undernutrition problem and caseload. A profile of undernutrition can be built by compiling them and considering them as a collective (including structured discussions with key stakeholders to arrive at a shared analysis). Operational priorities can then be set, together with an understanding of possible contributions to address undernutrition through various sectors, as outlined in Chapter 2.

Where such information is limited (e.g. in sectoral breadth and/or geographical coverage), a profile to understand the causes of undernutrition cannot be built. It then becomes necessary to fill the information gaps. There are various analytical tools that can be used for this. **Annex 6** provides model terms of reference for undertaking a nutrition situation analysis.

(See the Laos case study online on the value of analysis)

(61) *Copenhagen Consensus 2008 — Results.* Five of the top nine strategies endorsed by a panel of expert economists concerned undernutrition.

3.1.2. Analysing and understanding governments' response to undernutrition

Experience from around the world highlights several key characteristics of government that shows a national commitment to nutrition ([62]).

- Government leadership, often at senior level such as the president's or prime minister's office.
- Strategic capacity in government.
- Strong local governance, decentralisation and community participation (as in Bolivia).
- Legal frameworks to secure nutrition commitments, even with changes in government or personnel (as in Madagascar).
- Strong mechanisms for cross-sectoral and cross-ministerial coordination (as in Peru).
- Accountability, monitoring and the ability to track progress.
- Some countries are ready to use multiple contributions for nutrition:
  - in Brazil, the food security agenda was a primary entry point,
  - in Peru, poverty was the entry point,
  - in Laos, nutrition was linked to the economic growth agenda.
- Funding through national budgets (as in Bolivia, which pursued efforts to implement programmes to scale rather than through pilots). Donor flexibility was also seen as essential.
- Evidence-based decision-making where strategic priorities are informed by research on integrating nutrition in the national development plan (as in China).

The importance of government leadership and strategic capacity is worth underscoring. These are essential to ensuring that nutrition is meaningfully included in the national agenda. For this reason, the government's position needs to be understood so that donor investments can be aligned with it.

These characteristics may be of strategic use to donors when considering how to approach nutrition. For it could be that strategies that aim to build such government characteristics are essential pre-conditions to effective programming, helping, as it were, to create a conducive environment where nutrition-focused investments can be effective (see Section 3.3). The case study from Brazil (online) offers some insights into how such government characteristics can generate real political momentum behind nutrition, both nationally and internationally.

Annex 3 sets out key indicators that can be used to assess a government's commitment and capacity to combat undernutrition. An assessment of some governments' commitment to addressing undernutrition has already been made (see **Annex 2**).

Key questions

- Does the national strategic framework recognise undernutrition adequately as a development problem?
- Is nutrition an integral part of the poverty analysis for this?
- Is there a nutrition strategy/action plan and adequate institutional armaments in place?
- Are multiple determinants of undernutrition identified?
- Is the rhetoric on nutrition followed-up by action?
- Do proposed strategies/actions respond to the specific dynamics of the nutrition problem?
- Are proposed actions prioritised and costed?
- Does existing capacity limit the proposed actions?
- Are nutrition indicators used to monitor progress in the national strategy?
- Does access to nutrition information strengthen the chances for action?

(62) Report on High level meeting on nutrition, organised by the UN Standing Committee on Nutrition and hosted by the European Commission, 23–24 November 2009, Brussels, p. 3. www.unscn.org/files/Annual_Sessions/2009_Brussels/Brussels_High_Level_Nutrition_Meeting_report__final.pdf

3.1.3. Analysing and understanding other stakeholders' responses to undernutrition

The activities and plans of other stakeholders (such as the UN, NGOs, civil society groups and the private sector) need to be included in any contextual analysis.

Key questions

- Do strategies recognise undernutrition as a development problem? Is there a strong (and shared) evidence base for their investments?
- Are the UN, Red Cross or NGOs addressing undernutrition? If so, is there a shared rationale and vision?
- Is there a funding gap for these stakeholders?
- Are priorities agreed (geographical and/or sectoral)? Are there gaps/overlaps?
- Are there any coordination systems? Are they effective?
- What national or international advocacy is required to support or build agreement that undernutrition is a problem needing concerted action?
- Are there information and/or research gaps that need donor support before nutrition investments in that context can be calculated?

Understanding the positions and capacities of existing stakeholders provides an indication of what is feasible in a given context.

3.2. Raising the national profile of nutrition

The first requirement is to make nutrition a priority for the national government. From this basis, a donor can then develop their own strategy to support the government, in line with other stakeholders. In emergency situations, there may be resistance from a government to prioritise nutrition, since the emergence of undernutrition may be seen as failure of the state's services. The government may also wish to avoid an influx of new agencies and international media that a 'nutritional emergency' can inspire. In such cases, strong evidence of the need for humanitarian action is a critical component to the advocacy that may be required.

Donors can help governments establish nutrition as a development priority through on-going political dialogue. Key factors in building national commitment to nutrition include:

Champion(s) of nutrition — people able to access policymakers and to carry out evidence-based advocacy — to build partnerships of individuals and institutions to influence politicians and implementing agencies. Key to this is convincing others that improving nutrition is essential to achieving their own goals (whether political stability, national security, developing education, industry or agriculture, or international competitiveness).

Effective communication is the key to building commitment. Different communication strategies are needed to win the support of different stakeholders.

Building informal constituencies in the civil service and in civil society, as well as with industry where appropriate. Efforts to organise civil society in support of nutrition are particularly critical as they can exert public pressure to keep government or donor commitments on track ([63]).

Any cooperation strategy in the field of maternal and child undernutrition must take into account the nature of the problem, the commitment of the government, the strengths and weaknesses of the different sectoral or thematic interventions of the government and the strategies of other stakeholders. A basic starting point is having nutrition-sensitive national policies that encourage a multi-sectoral approach to addressing chronic and acute undernutrition. One key point of leverage is the inclusion of nutrition in the national strategic framework (**Box 11**).

Having nutrition in a national plan or strategy provides the legitimacy and feasibility that enables donors to channel support. The type of support will depend on the outcomes of the various analyses described earlier (see **Figure 6** for an overview of the likely possibilities).

(63) Edited excerpts from World Bank (2006), *Repositioning Nutrition as Central to Development A Strategy for Large-Scale Action*, p. 108 (http://siteresources.worldbank.org/NUTRITION/Resources/281846-1131636806329/NutritionStrategy.pdf).

Box 11: Introducing nutrition objectives into a national strategic framework [64]

Step 1. Determine whether the country has a nutrition problem of public health significance

- Yes — if listed in **Annex 2** as one of the 68 high-burden countries.
- If yes, a strong rationale for including nutrition issues in the national strategic framework exists.
- If no, develop a case for prioritising nutrition in the country national strategic framework.

Step 2. If nutrition issues are important

- Review the size and nature of the nutrition problem.
- Using estimated levels of undernutrition, calculate estimated productivity losses attributable to undernutrition, and analyse the costs-benefits of addressing undernutrition.

Step 3. Identify the (possible) causes of undernutrition

- This information may be available in the country.
- If not, commission some analytical work — demographic household surveys (DHS) ([65]) data are usually a good source for these analyses; also check for other data sets such as multiple indicator cluster surveys (MICS) ([66]) and living standards measurement surveys ([67]).

Step 4. Identify what is already being done

- Assess political commitment of government to tackle undernutrition.
- Review government policies, strategies, programmes, institutional arrangements and capacity.
- Review other national and international involvement in nutrition.

Step 5. Design intervention strategy

- Identify objectives and priorities for nutrition in the country.
- Select strategies and actions that will respond to the size and nature of the nutrition problem.
- Prioritise action to match the epidemiology of the problem and the country's capacity.
- Ensure appropriate institutional arrangements to support implementation of nutrition activities across sectors.
- Identify monitoring and evaluation arrangements and capacity development plans.

Step 6. Allocate reasonable funds and resource them through subsequent strategies

- Support implementation.
- Strengthen capacity and implementation through a learning-by-doing approach.

(64) Adapted from Horton, S., et al. (2006), *Scaling Up Nutrition. What will it cost?,* World Bank, p. 106.

(65) Demographic and health surveys (DHS) are nationally representative household surveys that provide data on a wide range of monitoring and impact evaluation indicators in the areas of population, health, and nutrition (www.measuredhs.com/aboutsurveys/dhs/start.cfm).

(66) Unicef assists countries in collecting and analysing data to fill data gaps in monitoring the situation of children and women through its international household survey initiative, the Multiple Indicator Cluster Survey (MICS) (www.unicef.org/statistics/index_24302.html).

(67) World Bank, The Living Standards Measurement Study (LSMS) was established by the Development Economics Research Group (DECRG) to explore ways of improving the type and quality of household data collected by statistical offices in developing countries (http://go.worldbank.org/IPLXWMCNJ0).

3.3. Shaping a donor response to undernutrition

The process of incorporating specific nutrition objectives (and therefore results and indicators) in programmes can be spread over several programming phases. These are summarised in **Box 12**.

Box 12: Incorporating nutrition objectives in programming

	Nutrition situation analysis — at country or regional level (see **Annex 6**) (Government, Member States, EU delegation, ECHO, civil society, other stakeholders)
	↓
Analysis and scoping	Negotiation of sector priorities, both focal and non-focal sectors (Government, Member States, EU delegation, other stakeholders)
	↓
	Inclusion of nutrition issues in donor country strategy paper (see **Table 3**)
Design	↓
	Nutrition included in national or regional programme: Financing modality agreed and arranged (budget support, pooled funding or grants)
	or
Implementation and Monitoring	Nutrition included in ToR for annual programme design missions
	↓
	Focal sectors have objectives and outcomes linked to reduction/prevention of undernutrition ([68])
	↓
Evaluation	Mid-term review; nutrition included in monitoring missions (to assess progress and revise priorities to meet nutrition objectives)
	↓
	Nutrition objectives/indicators included in evaluation, impact assessment and audit missions

Section 3.3.1 focuses primarily on donors' engagement in stable contexts where close alignment with the country's priorities is likely to be possible. Section 3.3.2 considers specific issues that may emerge in situations of emergency, fragility and transition. There are a number of potential contributions to the donor's country/regional strategy where information on the nutrition situation (needs and actors) can be integrated. These are summarised below.

3.3.1.Setting priorities

The 2005 Paris Declaration on Aid Effectiveness and the 2008 Accra Agenda for Action ([69]) are fundamental underpinnings to the donor approach.

An individual donor's response to undernutrition will necessarily be guided by the plans/priorities of the government and the plans/responses of other stakeholders. There will therefore be a process of negotiation with the government and other donors on which sectors to prioritise and invest in. It is at this stage, therefore, that critical decisions will need to be taken.

(68) For example, the model of Managing for Development Results Framework could be used (www.mfdr.org).
(69) www.oecd.org/document/18/0,3343,en_2649_3236398_35401554_1_1_1_1,00.html

As outlined above, an analysis of the nutrition situation, including the chain of cause-and-effects that lead to undernutrition, provides the evidence base required to make informed judgements. **Figures 5 and 6** can be used to steer the negotiations and help rationalise the choice of sector priorities and the contribution of each stakeholder.

In developing a donor country strategy paper, there are a number of avenues where nutrition (needs, objectives, actions and indicators) can be incorporated. **Table 3** provides a summary of these.

Table 3: Nutrition in the donor country strategy paper

Possible contributions to CSP	Nutrition issues
Donor objectives	Nutrition is featured as a policy objective.
Situation analysis (economic, political, social and environmental)	Main nutrition challenges are defined, together with social and economic factors that could affect progress. This section could include, for example: — major pressures and impacts resulting from social, economic and political trends; — options for addressing undernutrition that are likely to be economically attractive, i.e. impact on GDP of stunted children between age 0 to 24 months. Quantify payoffs from investing in nutrition for productivity (direct), schooling (indirect productivity impacts), and health (mortality, morbidity, disability; DALYs). Identify links between poverty alleviation and women's health benefits.
Policy agenda of the beneficiary country	National, regional and continental nutrition policies could be mentioned. Nutrition may also be an indicator in the national poverty reduction framework.
Outline of EU/MS assistance	This would be based on the results of the nutrition situation analysis, including any lessons from previous nutrition interventions, and would also take account of action by other stakeholders to address undernutrition.
Response strategy	This would identify measures to address nutrition concerns, including challenges, risks and constraints. The strategy would highlight ways to optimise the positive changes brought about through the donor's intervention, such as: (1) selection of focal sectors; (2) objectives, approaches and strategies for focal sectors; (3) selection of non-focal sectors and type of actions to be supported; (4) work programme and budget; (5) policy dialogue; (6) indicators.

3.3.2. Specific approaches for humanitarian response, transition situations and fragile states

In populations affected by emergencies, the priority focus is on acute undernutrition (wasting, and more rarely, kwashiorkor), which is associated with a higher risk of mortality and morbidity. Around 55 million (10%) of the world's under-5 children are wasted, 19 million severely so. Wasting contributes to nearly 15% of worldwide deaths of under-5 children.

A third of the world's stunted children live in fragile states.

The donor approach in such situations is likely to be guided by the Principles of Good Humanitarian Donorship ([70]) and the OECD Principles for Engagement in Fragile States ([71]).

There are specific challenges associated with programming in emergencies, fragile states and transition situations. One important challenge is the need to build coherent approaches and meaningful links to relief, rehabilitation and development (LRRD). This should ensure that the short-term objective of saving lives does not, as far as possible, undermine prospects to properly manage the burden of undernutrition on a more sustained basis. Likewise, it should ensure that building longer-term capacities to manage undernutrition include, rather than compromise, capacity to respond to nutritional shocks and crises. Although there is general acceptance of the need for such coherence, making it happen can be more difficult. One of the core dilemmas of LRRD in emergencies, fragile states and protracted crises concerns the relationship between donors, humanitarian actors and the state. There may be scepticism or unwillingness to support the building of national capacity and long-term systems in contexts where the state's role or legitimacy are in question or where close relationships could compromise humanitarian principles.

There are also several practical constraints, such as funding timeframes, choice of sector priorities or the aid modalities and partners used (see the Mali case study online — Challenges in building coherent programmes in situations of transition).

The importance of coherence across emergency, fragile and transition situations is underscored in the OECD/DAC principles to guide international engagement in fragile states (**Box 13**). These emphasise the need for close cooperation between economic, development, diplomatic, humanitarian and security actors. Although the principles are generic, and specific to fragile states as opposed to humanitarian contexts, many are nevertheless valuable reminders of approaches that can inform donors' engagement concerning undernutrition in a variety of contexts, especially since cooperation across the aid/development/security spheres is increasingly important to the EU and many Member States.

Box 13: Principles of good international engagement in fragile states ([72])

(1) **Take the context as the starting point:** requiring a sound political analysis to recognise the different constraints of capacity, political will and legitimacy.

(2) **Do no harm:** avoid creating societal divisions and worsening corruption and abuse by undertaking strong conflict and governance analysis. Transparency is key to avoiding corruption.

(3) **Focus on state building as the central objective:** address governance and basic services.

(4) **Prioritise prevention**: reduce future risks; address root causes and avoid quick-fix solutions.

(5) **Recognise the links between political, security and development objectives:** improve the coherence of international interventions.

(6) **Promote non-discrimination as a basis for inclusive and stable societies:** gender equity, social inclusion and human rights.

(7) **Align with local priorities in different ways in different contexts:** seek to build on existing systems rather than creating parallel ones.

(8) **Agree on practical coordination mechanisms between international actors:** through shared analysis; joint assessments; common strategies; and coordinated political engagement.

(9) **Act fast, but stay engaged long enough to give long-term success a chance:** assistance must be flexible enough to take advantage of windows of opportunity and respond to changing conditions on the ground; avoid volatility in funding.

(10) **Avoid pockets of exclusion (address 'aid orphans'):** where there are no significant political barriers to engagement yet few international actors are engaged, and aid volumes are low.

(70) www.goodhumanitariandonorship.org/gns/principles-good-practice-ghd/overview.aspx

(71) Principles for good international engagement in fragile states and situations, OECD/DAC, April 2007, Paris (www.oecd.org/dataoecd/61/45/38368714.pdf).

(72) Ibid.

Consistency in the overall response, the presence of adequate, experienced and well coordinated human resources and sustained funding are of fundamental importance. Relief, crisis management, reconstruction assistance and long-term development cooperation must be properly linked as part of an integrated approach built on the principle of sustainable development ([73]).

This vision of an integrated and coordinated approach has, in practice, been hard to implement in nutrition programmes. This is partly because of a potential divide, in principles and objectives, between humanitarian and development action ([74]); partly because of the (political) willingness to make this approach work and partly because of the bureaucracy that makes it difficult to do so. See the Nepal case study online — Tackling nutrition in a transitional context.

Ultimately, the challenge of tackling undernutrition coherently across changing operational contexts is less to do with technical know-how and more to do with priority-setting and with overcoming the administrative and bureaucratic hurdles that the aid system has created. This is true in terms of nutrition rarely featuring as a priority sector for donor (development) support, but it is also true in terms of the different priorities and funding criteria that prevail during 'emergencies' compared to 'development' contexts. Thus, the transition from development to humanitarian aid, and from humanitarian to development, requires careful consideration of how the context is changing — in terms of the situation and needs (including use of early warning systems, surveillance information and assessments); the coordination systems and actors involved (including capacity); as well as the funding opportunities, time-frames and funding priorities.

Nevertheless, there are positive experiences too, which highlight the increasing linkages across shifting operational contexts. For example, there is greater focus on disaster risk management and risk reduction within development cooperation, whilst humanitarian efforts are increasingly including policy-level investments that link to longer-term considerations. Reliable information and committed working practices, for instance in the form of joint assessments, joint situation analyses and monitoring, and joint programming efforts, can be a powerful bridge between humanitarian and development actors, across changing operational contexts.

Constant vigilance and analysis are required to ensure that the resources available are used to best effect. The best aid instruments to meet the priority nutrition needs are likely to change as the context shifts (and thereby the operational opportunities). See the Mali case study online — The need to overcome the emergency/development divide. This is the core challenge of transition situations. All the preceding discussions about the need to take a multi-sectoral approach to undernutrition prevail, with the additional requirement to work in a flexible way that straddles the humanitarian and development aid frameworks.

3.4. Designing monitoring, evaluation and learning

Time and again, experience has shown that monitoring of and learning from programmes is weak; monitoring tends to be an afterthought, ill-planned and poorly executed. This is as true for nutrition as it is for other programming areas. It is a serious flaw that needs to be addressed from the earliest stages of programme planning — where monitoring needs to be considered and negotiated with government counterparts regarding: which indicators to use; the frequency of data collection; the lines of responsibility between various stakeholders; the form of analysis and reporting required; and the skills and competencies needed. The need for such improvements in nutrition monitoring and evaluation systems is even greater given the current international focus on the MDGs, and specifically MDG1.

Monitoring nutrition interventions, whether in emergency or development contexts, is an integral component to ensure effectiveness — be it saving lives or preventing nutritional deterioration. Successful monitoring systems allow for real-time improvements to interventions to achieve the desired progress. Monitoring indicators for nutrition are usually a combination of process, outcome and impact indicators (see **Annex 3**). Combining quantitative data (such as estimates of the prevalence of undernutrition) and qualitative data (such as feedback from target groups on the appropriateness of nutrition-sensitive social protection programmes) provides a stronger base to better understand the appropriateness of interventions and to assess any unpredicted (positive or negative) changes brought about. In addition, evaluations will use the monitoring data to identify overall learning for future programmes, assess the effectiveness of interventions and compare the costs of the interventions to their impact. Successful evaluations have four main qualities:

- there is prior agreement on the purpose of the evaluation;
- the basic questions of 'what, where, when and why' can be answered;
- it is undertaken by a capable team, able to meaningfully seek the views of target groups as well as to interpret statistical data;
- the results and recommendations are presented and discussed in such a way that they are likely to be used.

(73) COM(2007) 643. Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions: Towards an EU response to situations of fragility — engaging in difficult environments for sustainable development, stability and peace (http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2007:0643:FIN:EN:PDF).

(74) Whilst humanitarian actors are guided by the humanitarian imperative to save lives and to respond to suffering without discrimination of any kind, development actors tend to be guided more by the need to maximise growth and development by building national capacities, cooperating closely with national governments and assisting people who have viable potential as opposed to the most vulnerable and most in need.

Effective monitoring, evaluation and learning systems in nutrition are of paramount importance as different sectors may be contributing to nutrition outcomes. Each sector must be able to monitor its own contribution to the changes being made. In particular, there is no clear evidence as to which food security actions are most likely to result in nutritional benefits, so there is need for strong monitoring and evaluation systems to identify this learning.

There are also several challenges to effective monitoring and evaluation. One key challenge is to attribute change to a specific programme (i.e. the programme caused the change). Where comparisons are made to non-intervention (or control) groups, then the selection of these control groups is critical to ensure that direct comparisons can be made legitimately. Another important challenge is the existence and quality of baseline data to assess progress in meeting project objectives. Most large-scale nutrition surveys carried out in developing countries have been conducted as part of national or regional exercises that are independent of projects. At the same time, a growing number of large-scale projects are developing their own, non-standardised, monitoring and evaluation systems that include periodic surveys to assess whether project objectives are being met. In both cases, the use of such 'baselines' to attribute changes to a project or programme can be problematic and tenuous.

Effective monitoring and evaluation is of particular concern in emergencies, where there is, typically: a lack of standardisation of methodologies and indicators; no agency with a mandate to act on the findings; and limited time for establishing baseline information ([75]). However there are guidelines for monitoring and evaluating nutrition interventions (see **Annex 7**).

Sources of further information

- EC (2006), Evaluation methods for the European Union's external assistance, EuropeAid Co-operation Office,
  Methodological bases for evaluation, Volume 1,
  Guidelines for geographic and thematic evaluations, Volume 2,
  Guidelines for project and programme evaluation, Volume 3
  (http://ec.europa.eu/europeaid/evaluation/methodology/index_en.htm).
- Gertler, P., J., et al. (2011), Impact Evaluation in Practice, the World Bank. Available as an interactive textbook at (www.worldbank.org/pdt).
- Impact Assessment of Large Scale Food Security Programmes, E-learning course by FAO in collaboration with Wageningen University and Research Centre for Development Innovation (2010) (www.fao.org/spfs/monitoring-evaluation/e-learning/en/).
- ODI (2011), 'A guide to monitoring and evaluating policy influence', Background Notes, February 2011 (www.odi.org.uk/resources/download/5252.pdf).
- OECD, Development Assistance Committee (DAC), Evaluating Development Co-operation. Summary of Key Norms and standards (www.aideffectiveness.org/media/k2/attachments/41612905.pdf).
- Sphere Project (2011), The Humanitarian Charter and Minimum Standards in Disaster Response (www.sphereproject.org)
- University of Nairobi School of Nutrition Science and Policy (2000), 'Monitoring and evaluation of nutrition and nutrition-related programmes, A training manual for programme managers and implementers', The Applied Nutrition Programme, Tufts University, August 2000 (www.globalhealthcommunication.org/tool_docs/63/m&e_training_manual.pdf).
- World Bank (1999), Monitoring and Evaluation. A Guidebook for Nutrition Project Managers in Developing Countries, Human Development Network (http://siteresources.worldbank.org/NUTRITION/Resources/Tool8-fulltext.pdf).

(75) ECHO Internal reflection paper on nutrition in emergencies, May 2010.

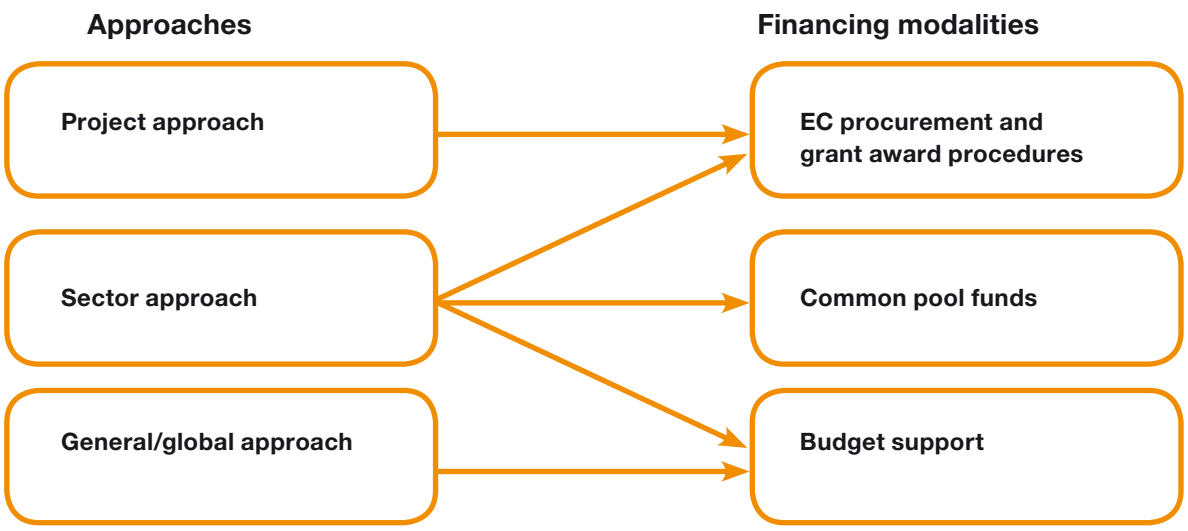
Chapter 4: Nutrition in aid delivery methods

Source: O. Lehner

Having explored how nutrition can feature in specific thematic areas, national and donor strategies, this chapter reviews the implications of using different aid delivery methods. The choice of method needs to be considered in light of context-specific institutional funding opportunities. The ultimate objective remains to support the government to develop and implement a nutrition-sensitive national policy/strategy.

Figure 7 presents the three approaches that tend to be used and their related financing modalities.

Figure 7: Aid delivery methods used by the European Commission



Source: adapted from Guidelines on the programming, design and management of general budget. Support, EC, revised version 2009, unpublished.

In terms of sector approaches, there are several different models on how funds can be managed. **Box 14** provides a summary of those most commonly used.

Box 14: Sector terminology

A **programme-based approach** (PBA) is a way of engaging in development cooperation based on the principle of coordinated support for a locally owned programme of development. This could be a national poverty reduction strategy, a sector programme, a thematic programme or a programme of a specific organisation.

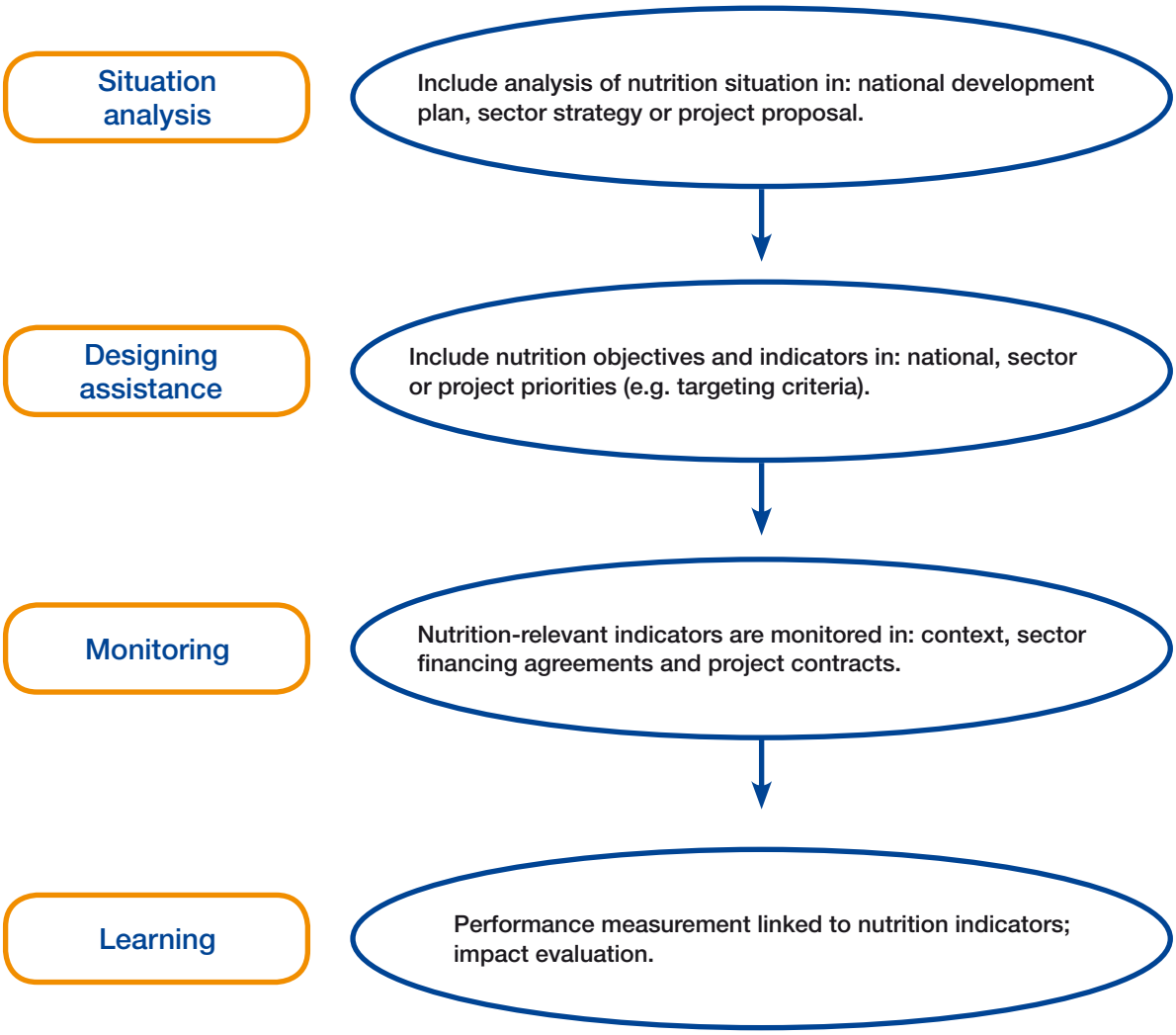
A **sector-wide approach** (SWAp) is usually seen as a programme-based approach operating at sectoral level. It defines all significant funding that supports a single sector policy and expenditure programme.

A **sector programme** is a government-owned programme, based on a sector policy and strategy, a sector budget and a sector coordination framework. The Commission's aid instrument for supporting a sector programme is known as a **sector policy support programme** (SPSP)**.** PBA**,** SWAp and SPSP could be implemented through either project, sector budget support or general budget support.

A **pool fund** receives contributions from different external agencies, and in certain cases from governments, to finance a set of eligible budget lines or actions to support a sector programme.

Each aid delivery method offers a fresh opportunity to introduce and embed nutrition-related concerns and factors. The process of working through each method tends to include several key steps that are common to all methods. These are summarised in **Figure 8**.

Figure 8: Making aid delivery methods nutrition-sensitive



This process provides a backdrop for exploring specific steps and issues relevant to different aid delivery methods. Three approaches are covered in the two sections that follow. The first (4.1) covers general/global and sector approaches. These two approaches are discussed together since they are both financed by budget support. The second section (4.2) covers the project approach — which is further subdivided into development and humanitarian projects.

4.1. Guidance for addressing nutrition through general and sector approaches

The national strategies of partner countries are usually focused on poverty reduction. But successful poverty reduction — and ultimate alleviation — is likely to require specific focus on nutrition (see 1.2.2 on the impact of undernutrition on the national economy). This, therefore, needs to be recognised in the early dialogue with government to inform the decision about which aid approach to use. Once a general or sector approach is selected, some of the issues considered during programming stage will have to be reviewed and developed with the government and other stakeholders.

The following discussions should explore the best way to incorporate nutrition in poverty-reduction efforts.

- Does the government recognise the challenge of undernutrition? This is the most important hurdle, for without government buy-in, nutrition risks being an insignificant add-on. Sensitisation to the importance of nutrition is essential to securing meaningful government engagement. Evidence of the scale of undernutrition in the country, perhaps tied to econometric models of its impact at national level, are extremely powerful aids. But such analysis is rare; in which case some of the statistics and models presented in Chapter 1 could be used.

- Is there a strong policy framework, with associated budget allocation? If not, could it be incorporated into the cooperation agreement?
- Are programmes with nutrition objectives/outcomes in place or planned? If not even planned, these could be phased in through the preceding steps to develop a policy framework.
- Are nutrition-related indicators included in the performance assessment framework?

Whether through a general or sector approach, multiple institutions are likely to be required to effectively tackle the multi-faceted nature of undernutrition. In this light, the following guidance may be of help.

- Solid mechanisms for sector and donor coordination are critically important. Many actors are likely to be involved, (both within and outside government, operating at national and subnational levels), so an institutionalised national nutrition coordinating body or council could be needed.
- The institutional mandate for overall coordination has to be well thought through. A central ministry (e.g. Finance or Planning), a minister with more general responsibility, or a high-level office outside any ministry (as discussed earlier) may play that role.
- Similarly, good governance is heavily dependent on effective action at subnational levels, in support of decentralisation initiatives.

Tables 4a and 4b summarise the processes and incremental steps to incorporating nutrition in general/global and sector approaches. Guiding questions provide prompts on how to do this at each phase. Even before phase 1, however, an important preliminary step is to integrate nutrition objectives and indicators in the country's development strategy/national framework, as discussed in Chapter 3.

Table 4a: General/global approach: steps to incorporating nutrition

Phases	Actions to be taken	Guiding questions
1. Analysis and scoping (identification)	Government eligibility for budget support Understanding government's position on nutrition Consistency with EU policies/strategies and the Aid Effectiveness agenda Implementation issues Issues and state of play Risks and assumptions Next steps, work plan, and time schedule	Has a nutrition situation analysis been undertaken? If not, why not and could one be planned? How do national or sector policies/strategies refer to nutrition? Is there scope for strengthening them? How are national or sector policies/strategies likely to have an impact on maternal and child nutrition? Are nutrition indicators available in the national policy and strategy? Are nutrition indicators included in PAF (performance assessment framework)? Are there donor allies who are concerned about nutrition? Is the government positioned to coordinate nutrition across different sectors? Are there specific capacity gaps (skills and/or processes such as nutrition monitoring systems) to be addressed?
2. Design (formulation)	Rationale, Country description Implementation issues Supporting document	How is nutrition featured in the contextual analysis? Which nutrition indicators could be linked to disbursement? Are these indicators measured annually? Does the government oversee these indicators? Are chosen indicators coherent with the country context? Have existing analyses of undernutrition and food insecurity been included as supporting documents? Is there a clearly developed framework for sourcing nutrition-related information and for verifying its reliability?
3. Implementation and monitoring	Matrix of performance indicators Coherence with the MDGs Ensure the quality of performance indicators	Are any of the MDGs most relevant to nutrition (MDGs 1, 2, 4 and 5) a priority for the government? Is the nutrition target for MDG1 used by the government (i.e. halving the proportion of underweight children aged 5 years or below)? Could it be?
4. Evaluation	Evaluation should be government led and include other donors providing budget support.	The conceptual framework for undernutrition offers useful guidance on what to assess.

Table 4b: Sector approach: steps to incorporating nutrition

Phases	Actions to be taken	Guiding questions
1. Analysis and scoping (identification)	Assess the status of the sector approach and the consensus and readiness to develop a sector programme. Make a preliminary assessment of the quality of the sector programme through the seven areas of assessment: (1) the sector policy and strategy (2) the budget and its medium-term perspectives (3) sector and donor coordination (4) institutional setting and capacity issues (5) performance monitoring systems (6) the macroeconomic framework (7) public financial management (PFM) systems.	How could this sector help yield nutrition benefits? What would the implications be for coordination and monitoring? Does the sector have a well-formulated policy with nutrition implications? Does it link to the national poverty analysis? Is nutrition an objective of the sector or an outcome indicator? If not, could it be? Would other donors support it? Would nutrition concerns influence any targeting decisions? (e.g. in prioritising support to areas with higher levels of undernutrition)? To what extent could nutrition concerns be addressed through a multi-stakeholder working group? Capacity building, strength of the sector (in terms of budget availability and dedicated personnel)? Does the work of other development partners include nutrition objectives? What proportion of the sector budget would be aligned to nutrition outcomes? Are nutrition indicators included in the PAF? What cooperation and coordination is required across different sectors (e.g. to use information from other sector sources, to seek technical support)?
2. Design (formulation)	Prepare a financing proposal.	
3. Implementation and monitoring	Include sector policy support as a contribution to sector programme.	Could nutrition indicators relevant to the chosen sector(s) also be compatible with the poverty alleviation strategy?
4. Evaluation	Assess relevance, efficiency, effectiveness, impact and sustainability of programme, its added value in helping achieve the sector goals and the appropriateness of chosen implementation modalities.	Has the policy support resulted in nutrition-related outcomes (as per objective and/or indicators agreed)?

Key questions

Are the nutrition indicators specific, measurable, achievable, relevant, time-bound and under the control of the government? Indicators should be accurate, attributable, available and non-sensitive to time changes, yet achievable and realistic — to avoid hampering the disbursement of funding tranches due to unrealistic requirements.

Indicators appropriate for general and sector approaches

For both general and sector approaches, careful consideration will need to be given as to which nutrition-related indicators to include. This will be guided by discussions with government and other stakeholders, the information context, national capacity (for data gathering and analysis) and budgets. **Annex 3** sets out the nutrition-specific indicators that have been used internationally, with guidance on their interpretation and suitability for the different aid delivery

methods. **Box 15** draws from the list in **Annex 3** and lists the indicators considered to be most relevant to general and sector approaches. Only indicators with specific added value to nutrition are listed, and are intended to complement other indicators that might be included in general and sector approaches. Indicators should be drawn from national policies and strategies; they should not be imposed. It is hoped that the annex provides ideas and stimulates careful consideration of what might be appropriate in a particular context.

Box 15: Key nutrition indicators for general and sector approaches

Impact indicators

- Prevalence of underweight children under-5 years of age (MDG 1c indicator)
- Prevalence of stunting among children under 2 years of age
- Prevalence of wasting among children under 5 years of age
- Prevalence of low birth weight
- Prevalence of anaemia in women of reproductive age
- Prevalence of iodine deficiency disorders.

Outcome indicators

- Minimum dietary diversity (6–23 months)
- Minimum acceptable diet (6–23 months)
- Individual dietary diversity score (women of reproductive age)
- Coverage of children vitamin A supplementation
- Coverage of iron/folate supplementation during pregnancy
- Coverage of treatment of severe acute malnutrition.

Input indicators

- Existence of a national nutrition strategy/policy/action plan
- Nutrition objectives included in relevant national policies/strategies
- Inclusion/prioritisation of nutrition in national framework
- Nutrition governance.

The performance targets for each indicator would normally be established on an annual basis. When selecting the indicators and their targets, attention should be paid to avoiding potential problems, such as the absence of precise and unambiguous definitions, lack of coherence between the calendar of the financing agreement (for assessment of performance) and that of national processes (including availability of data) which may result in delaying disbursements or lack of comparability of the indicators from one year to the next. See the case study on Mauritania online — The challenge of integrating nutrition indicators in budget support.

The sources for each of the indicators should be clearly identified and, as much as possible, draw on data produced by the national statistical system (avoiding ad hoc or project-related indicators). The methodology used to calculate each indicator should be clearly described, including that of aggregated data, so that indicators are reliably comparable from one year to the next. The sensitivity of each indicator to policy changes will also need to be assessed, so that the time schedule of monitoring corresponds to the likely time necessary to see desired improvements.

Choosing targets for the indicators

- A clear baseline will be required, against which progress can later be evaluated.
- The targets should be drawn from national and/or sectoral strategies, and should be coherent with international objectives (especially the MDGs 1, 4 and 5);
- The composite governance indicators (see **Annex 3**) are relevant to objectives concerning the development and implementation of national nutrition policies and strategies. The precise mix of indicators from all the possible options will depend on the context.

Peru: Sector budget support for the Peruvian nutritional programme

National development policy

In 2002, under the name of Acuerdo Nacional (National Agreement), the government together with the main political parties and civil society organisations agreed to a new approach where state policies would be developed through a consensual model. All relevant stakeholders would agree a shared vision for the policy and actively participate in the policy development process. The Acuerdo Nacional covers policies on poverty reduction and on food security. It prioritises support to vulnerable populations, socially excluded groups and people living in extreme poverty and is based on a holistic concept of human development.

An integrated strategy to fight poverty — Crecer (meaning 'to grow') — was shaped on the principle that only a common approach, which includes all relevant actors and different types of intervention, could effectively reduce poverty. Crecer prioritises the poorest rural areas with high child undernutrition rates to receive budgetary distributions. The key element of this strategy consists of multi-sector interventions which combine centralised governmental execution with decentralised implementation at local/regional levels. The Crecer strategy comprises several programmes tackling poverty, including mother and child health, nutrition, basic education and identity documents.

The Peruvian Nutritional Programme (PAN) is one of the programmes developed under Crecer. Undernutrition is considered to be a crucial cause of poverty and a social cohesion gap. The PAN's goal is to reduce undernutrition from 25% (in 2005) to 16% (in 2011) and the 2009 budget amounted to EUR 269 million. The logical structure of PAN, following a product–result–impact chain, allows follow-up and measurement of indicators. The Commission committed EUR 60.8 million at the end of 2009 for the implementation of PAN, through sector budget support (economic and finance), focusing on the three poorest regions of Peru. In early 2010, in order to increase the responsibility of these regional governments, the Ministry of Economy and Finance signed with each one a sector budget support, adapted to local public finance management. This gave them responsibility to implement health policy at regional level. This initiative aims to consolidate the decentralisation process and increase incentives to achieve the objective of reducing undernutrition.

Performance monitoring and criteria for disbursement

The disbursement of fixed instalments is conditional upon a positive evaluation of the macroeconomic situation, the satisfactory implementation of a PFM (public finance management) improvement action plan and satisfactory implementation of PAN. Other specific conditions included are: (i) improved public access to and transparency of information regarding strategic programmes; and (ii) setting of annual targets for the indicators of variable instalments. Variable instalments will be measured through indicators previously selected in agreement with relevant stakeholders. For instance, the percentage of children under 24 months of age enrolled in the integral health insurance with dietary iron supplement will be measured. The proportion is expected to increase from 4.5% (2009 baseline) to 59.5% in 2013.

For further reading see: http://ec.europa.eu/delegations/peru/eu_peru/tech_financial_cooperation/index_en.htm

Sources of further information

- EC Guidelines on the programming, design and management of general budget support, 2009 (http://ec.europa.eu/europeaid/how/delivering-aid/budget-support/index_en.htm).
- DG ECHO Interim position on nutrition in emergencies, 2010 (internal document)
- Communication: Humanitarian food assistance, 2010 (http://ec.europa.eu/echo/files/policies/sectoral/Food_Assistance_Comm.pdf).
- EU Communication: the EU role in global health, 2010 (http://ec.europa.eu/development/icenter/repository/COMM_PDF_COM_2010_0128_EN.PDF).
- EU Communication: an EU policy framework to assist developing countries in addressing food security challenges, 2010 (http://ec.europa.eu/development/icenter/repository/COMM_PDF_COM_2010_0127_EN.PDF).
- EuropeAid (2007), *Tools and Methods Series: Guidelines No 2 Support to sector programmes covering the three financing modalities: Sector budget support, Pool funding and Commission project procedures*, July 2007 (http://ec.europa.eu/development/icenter/repository/Support-to—Sector-Programmes_short_27072007_en.pdf).
- Commission concept note: *Social Transfers: an effective approach to fight food insecurity and extreme poverty*, 2010 (http://ec.europa.eu/europeaid/infopoint/publications/europeaid/186a_socialtransfer_en.htm).
- Commission concept note: *Enhancing EC's contribution to address maternal and child undernutrition and its causes*, 2009 (http://ec.europa.eu/europeaid/infopoint/publications/europeaid/137a_en.htm).

4.2. Guidance for addressing nutrition through projects

A project is a series of activities that aim to attain clearly specified objectives within a defined time-period and budget.

Key questions

- Can the project yield nutrition benefits?
- What is the undernutrition problem, who is most affected, where and why?
- What has already been done about it and by whom?
- Does your (planned) action reach those of greatest concern (under 2 and pregnant women), either directly or indirectly?
- Could your actions cause unintended harm?
- What can be done to strengthen the nutrition components?
- Nutrition actions (e.g. vitamin A supplementation)?
- Choice of intervention (diversified agriculture, etc.)?
- Project options, linking to other actions?

4.2.1. Guidance for addressing nutrition through development projects

Strategies and actions to improve nutrition need to be developed according to specific country needs, resources, circumstances and the development project objectives.

Table 5 summarises the steps in developing project support. Questions have been inserted for each phase to stimulate ideas on how nutrition can be incorporated.

Table 5: Steps to incorporate nutrition aspects when preparing project support

Phases	Actions to be taken	Guiding questions
1. Analysis and scoping (identification)	Assess the nutrition context. Scrutinise the proposals. Agree with the government and relevant stakeholders that proposed actions are appropriate. Assess partner's capacity and own resources. Make preliminary assessment of the most appropriate financing modality. Prepare and commission an assessment mission. Initiate internal quality control mechanism, e.g. quality assurance at country level.	Is nutrition a priority concern? Does it need to be? Who is worst affected by undernutrition? Where? What are the likely causes (c/f conceptual framework)? Trend: how has the nutrition situation changed over time? Proven skills/experience of partners in nutrition? Is there any nutrition coordination at government level and amongst stakeholders? Is there a shared analysis of the problem? Is there agreement on the need to respond in nutrition?
2. Design (formulation)	Make a detailed project description (situation analysis, project description, management arrangements, feasibility and sustainability). Prepare and conclude the financing agreement.	Are nutrition objective/outcomes integrated in the project design and log-frame? What actions need to be taken to ensure links with others sectors relevant to nutrition?
3. Contract with implementing partners	Describe the project, including specific deliverables and monitoring/reporting requirements. Prepare and conclude financing agreement with the government, international organisation or civil society.	Is there coherence between the nutrition objectives/outcomes and indicators defined in the financial agreement, the nutrition objectives/outcomes/impact and indicators defined by the implementing partner?
4. Implementation and monitoring	Provide timely finance, management and technical support to monitor project implementation and ensure an appropriate level of accountability for resources used and results achieved, and to identify and learn lessons from implementation.	Are nutrition indicators agreed and appropriate? How will data on these indicators be derived? Geographic coverage? Timeliness?
5. Evaluation	Assess with government and partners the relevance, efficiency, effectiveness, impact and sustainability of the programme, the appropriateness of chosen implementation modalities. Ensure that evaluation conclusions and transferable lessons are acted upon and fed back into future policymaking and programming.	Has the project resulted in nutrition-related outcome/impact (in line with the objective and/or indicators)?

See the Bangladesh case study online — A nutrition-focused livelihoods project and the Mali case study on linking relief, rehabilitation and development.

Sources of further information

- EuropeAid, Aid Delivery methods: Volume 1, Project Cycle Management Guidelines, March 2004
- (http://ec.europa.eu/europeaid/multimedia/publications/publications/manuals-tools/t101_en.htm).

Indicators for development projects will depend on the context, the sector chosen and the time frame, and could therefore be drawn from a very wide range of options. For this reason none are highlighted here. Please see the sector-specific indicators listed in **Chapter 2** and **Annex 3**.

4.2.2. Guidance for addressing nutrition through humanitarian projects

In contrast to most development situations, emergency responses often have a very strong emphasis on undernutrition. The challenge therefore is not to integrate nutrition but to manage the responses, act on results and demonstrate the impact more consistently (see **Box 16**). Furthermore, nutrition concerns in emergencies are often superimposed on pre-existing undernutrition, in particular stunting, which is rarely prioritised. In this way emergencies offer an opportunity to start tackling underlying causes with a view to long-term outcomes (see the Myanmar case study online, on relactation in an emergency and the Zimbabwe case study on breastfeeding promotion).

Box 16: Key issues concerning nutrition in humanitarian response ([76])

*An **emergency** or **humanitarian crisis** is an event which critically threatens the health, safety, security or wellbeing of a large group of people. The definition of an emergency is based on a combination of absolute thresholds (such as from Sphere or WHO) plus relative indicators set against a contextual norm. A crisis is triggered by a hazard that may be natural or man-made, rapid or slow-onset, and of short or protracted duration.*

There is no agreed definition of a 'nutrition emergency', although attempts have been made to classify the severity of an emergency using acute malnutrition as one indicator. While acute malnutrition is a major concern during emergencies, chronic malnutrition and micronutrient deficiencies also arouse triggering negative effects.

The key challenges in addressing undernutrition in emergencies are:

- responding to early warning indicators;
- promoting quality management of undernutrition in emergencies through evidence-based decision-making and implementation;
- building an evidence base in research priorities, including field-appropriate methods to assess the impact of action;
- ensuring a holistic and meaningful impact on undernutrition;
- measuring impact in relation to nutrition and mortality in emergencies;
- strengthening national capacity;
- ensuring more sustained support from development actors for tackling undernutrition.

While **Table 5** (in 4.2.1) could also be applied for emergency projects, **Table 6** below presents the most important steps to follow when dealing with nutrition in emergencies.

([76]) Excerpts from the ECHO Interim Position on Nutrition (IPN) paper, 2010.

Table 6: Steps to incorporate nutrition in emergency projects

Phases	Actions to be taken	Guiding questions
1. Analysis and scoping (identification)	**Rapid assessment**: direct observations of population and environment, interviews with key informants, focus group discussions, review of relevant data available (e.g. health facilities), rapid surveys. **Surveys:** cluster sample surveys of under-5 children (possibly including older children and/or women). **Nutrition surveillance:** repeated surveys, sentinel site surveillance, food security information system.	Is there an existing, or a threat of a, nutritional emergency? What is the estimated number affected by undernutrition? What is the prevalence of undernutrition? What are the immediate needs? What are local available resources and external resources needed? Are micronutrient deficiencies (likely to be a problem)? How has the nutritional status changed over time? What could happen in the immediate future?
2. Design (formulation)	Determine the most appropriate response to the emergency in the following cases. Moderate and/or severe acute malnutrition: support for community-based management (CMAM) with facility-based management for cases with complications; supplementary feeding. Micronutrient deficiencies: provision of vitamin A, iron, etc. Disease-related undernutrition: deworming, prevention and early treatment of diarrhoeal diseases, measles vaccination and malaria prevention/control. Safe water, sanitation and hygiene: improve access to safe water, hand washing and basic hygiene measures (e.g. soap). Access to adequate, safe and nutritious food: cash transfers or vouchers; general food distribution; blanket feeding of at-risk groups; nutrition information systems (early warning); national capacity building.	Is nutrition information regularly collected (including anthropometric data)? If not, should it be built into the project design? Are there capacity gaps (local/national) that need to be filled in order to manage the undernutrition situation? Is there the capacity to deal with future seasonal peaks of undernutrition? What preparedness and mitigation steps could help build community/structural resilience to future (recurrent) shocks?
3. Implementation and monitoring	The programme responds to problems identified; changes in the broader context are continually monitored; feedback from affected groups feeds in to modifications needed.	How will be programme be phased out or handed over to national structures?
4. Evaluation	Assess timeliness, appropriateness, cost effectiveness and impact of emergency interventions.	Is the emergency response in line with the country's long-term development strategy? Is the response conducive to long-term gains?

Key lessons on Linking relief, rehabilitation and development

Experience has demonstrated the need to maximise sustainable, inter-sectoral support for undernutrition over the longer term, and not to simply isolate efforts within humanitarian response. See the Mali case study online, on linking relief, rehabilitation and development, and the Nepal case study.

Lessons on strengthening the coherence and complementarity between humanitarian and development contexts include:

- encouraging robust policy and programme dialogue between emergency and development stakeholders involved in the nutrition field;
- supporting cooperation between humanitarian and development actors (for example through joint assessments, monitoring and evaluation), in order to prevent gaps or duplication in assistance and to promote continuity;
- developing preparedness measures to link development and humanitarian situations;
- emphasising training, capacity building, awareness-raising, reliable local early-warning systems and contingency planning;
- ensuring as much flexibility as possible within the instruments to be used in order to promote a smooth transition between prevention, preparedness, emergency response and recovery;
- promoting advocacy to ensure all instruments and actors respond appropriately to nutrition in emergencies.

Niger: Cash transfer in the context of a food crisis

Tessaoua, in the Maradi region of Niger, suffered severe food insecurity in the lean season of 2008. This was triggered by the global food price rise and local economic problems in neighbouring northern Nigeria (leading to a rise in prices of staple foods). This placed great pressure on the already low purchasing power of poor households in the area.

A cash transfer pilot project was set up to combat food insecurity and resultant undernutrition. Its specific aims were to offset the seasonal loss of purchasing power, enable households to meet basic needs (including food), protect livelihoods by preventing depletion of productive assets and help prevent undernutrition by addressing the economic causes.

The project targeted very poor households (identified through the 'Household economy approach' and wealth ranking) in declared areas that the government classed as severely food insecure. About EUR 90 a month was distributed to 1 500 households (approximately one third of the population) over a three-month period. Women were the recipients of the transfer and payments were on condition that the women attended nutrition awareness sessions and participated in community public health activities.

The project was implemented by Save the Children UK, in partnership with the Tessaoua Subregional Food Crisis Management and Prevention Committee (CSR/PGCA). It was funded by ECHO. Monitoring was based on a sample of 100 beneficiary households, and included anthropometric measurement of children under the age of 5 years.

Results

- Significant improvement in food consumption, both in terms of quantity (energy) and quality (through increased purchase of dairy products, oil and meat, which provide essential protein and micronutrients).
- Following the first cash distribution, 80% of households were able to add milk to the millet-based gruel traditionally fed to children (especially during weaning), whereas only half could do so before the project.
- The nutritional status (measured by weight to height) of children under 5 years in beneficiary households improved following the first cash transfer. It worsened between the second and third distributions, which coincided with the seasonal increase in malaria and diarrhoea.
- Despite a substantial improvement in food consumption, households still lacked micronutrients, particularly those found in animal products. These are expensive and, therefore, consumed in small quantities and only infrequently. Other measures are needed to offset the lack of micronutrients: either by increasing the amount of cash transfers, or considering micronutrient supplements, which could be more cost-effective in the short term.

These results suggest that cash transfers have the potential to improve diets and reduce acute malnutrition. As such, therefore, they should be considered within a package of measures to address undernutrition, particularly alongside other measures to increase access to micronutrients (e.g. supplementation) and to reduce the nutritional impact of diseases. The potential nutritional benefit of cash transfers is more likely to be realised if nutrition is included as an explicit objective and if other non-economic determinants of undernutrition are also addressed.

See also Kenya case study in Chapter 2.

Many of the sector-specific indicators listed in Chapter 2 also apply to emergencies. In addition, The *Sphere Handbook* (2011 edition) presents a comprehensive set of agreed indicators that span nutrition, food security, health, water/sanitation and shelter that should be incorporated into emergency monitoring systems. **Box 17** highlights those that are most relevant to an overall assessment of the situation.

Box 17: Key nutrition indicators in emergencies

- Prevalence of wasting in children under 5
- Prevalence of low MUAC (children 6–59 months)
- Prevalence of severe acute malnutrition (including oedema) in children under 5
- Prevalence of low BMI in women of reproductive age
- Exclusive breastfeeding until 6 months
- Early initiation of breastfeeding

Sources of further information

- ECHO (2009), Food assistance policy (http://ec.europa.eu/echo/files/policies/sectoral/Food_Assistance_Comm.pdf).
- ECHO (2010), Interim position on nutrition (internal document).
- Emergency Nutrition Network (www.ennonline.net).
- The Global Nutrition Cluster: The Harmonised Training Package (http://oneresponse.info/GlobalClusters/Nutrition/Pages/Harmonized %20Training %20Package.aspx).
- Good Humanitarian Donorship Principles, 2003 (www.goodhumanitariandonorship.org/gns/principles-good-practice-ghd/overview.aspx).
- The Integrated Food Security Phase Classification, IPC (www.ipcinfo.org).
- Save the Children, Emergency health and nutrition toolkit, (www.savethechildren.org/site/c.8rKLIXMGIpI4E/b.6206891/k.306B/Emergency_Health_and_Nutrition.htm).
- Sphere (2011), The Humanitarian Charter and Minimum Standards in Humanitarian Response (www.sphereproject.org).
- WFP (2003), Food and nutrition needs in emergencies (www.who.int/nutrition/publications/en/nut_needs_emergencies_text.pdf).
- WHO (2009), Child growth standards (www.who.int/childgrowth/publications/technical_report_velocity/en/).
- WHO (2000), *Manual on the management of nutrition in major emergencies* (http://whqlibdoc.who.int/publications/2000/9241545208.pdf).

ANNEXES

Source: Assunta Testa, FONSAN/PRESANCA Evaluator

Annex 1: Glossary

Acute malnutrition is characterised by wasting, but also includes kwashiorkor (nutritional oedema). It results from recent rapid weight loss, or a failure to gain weight over a short period of time (important in growing children). Acute malnutrition can be moderate (MAM) or severe (SAM). In combination it is global acute malnutrition (GAM). MAM is defined as wasting < – 2 Z scores of the median weight-for-height of the reference population; SAM is < – 3 Z scores and/or nutritional oedema.

Adult undernutrition: thinness is assessed using body mass index (BMI) — weight divided by the square of height (kg/m2). BMI < 18.5 denotes moderate undernutrition, and < 16 severe. Adult chronic undernutrition is important in pregnancy outcomes: height below 145 cm in females aged 15–49 years. Mid-upper arm circumference (MUAC) is another indicator of adult undernutrition.

Anaemia may be caused by lack of iron, folate or vitamin B12. It is difficult to diagnose accurately from clinical signs which include pallor, tiredness, headaches and breathlessness. WHO defines anaemia in children under 5 years of age and pregnant women as a haemoglobin concentration < 110 g/l at sea level.

Cut-off values for public health significance ([77])

Indicator	Prevalence cut-off values for public health significance	
Anaemia	≤ 4.9	No public health problem
	5.0–19.9	Mild public health problem
	20.0–39.9	Moderate public health problem
	≥ 40.0	Severe public health problem

Anthropometric status refers to body measurements of an individual in relation to reference values.

Anthropometry is human body measurement. Anthropometric indices can be single measures, such as mid-upper arm circumference, or combinations, such as weight and height. They are taken as proxy indicators of nutritional status.

Artificial feeding refers here to the feeding of infants under 6 months with breast milk substitute.

Bitot's spots are triangular patches of keratin built up on the conjunctiva of the eye. They are an early sign of vitamin A deficiency.

Blanket feeding covers all of an affected population without targeting specific subgroups.

Blended food is a precooked fortified mixture of cereals and other ingredients such as pulses, dried skimmed milk and vegetable oil. Blended foods are usually intended for young children as they provide essential micronutrients whilst also being energy-dense.

BMI — See adult undernutrition. The following cut-offs have been agreed:

- BMI < 17.0 indicates moderate and severe thinness;
- BMI < 18.5 indicates underweight. 3–5% of a healthy adult population has a BMI < 18.5;
- BMI 18.5–24.9 indicates normal weight;
- BMI ≥ 25.0 indicates overweight;
- BMI ≥ 30.0 indicates obesity.

A BMI < 16.0 is associated with a markedly increased risk of ill health, poor physical performance, lethargy and even death; this cut-off is therefore a valid extreme limit ([78]).

([77]) WHO, 2010.

([78]) WHO (2010), 'Country profile indicators: interpretation guide', *Nutrition Landscape Information System (NLIS)* (www.who.int/nutrition/nlis_interpretation_guide.pdf).

Cut-off values for public health significance

Indicator	Prevalence cut-off values for public health significance	
Adult BMI < 18.5 (underweight)	5–9%	Low prevalence (warning sign, monitoring required)
	10–19%	Medium prevalence (poor situation)
	20–39%	High prevalence (serious situation)
	≥ 40%	Very high prevalence (critical situation)

Calorie is a measure of energy usually measured in kilocalorie (kcal). It can describe energy used up by the body (energy expenditure) or the energy content of food that is eaten (caloric intake).

Cash transfer is a form of social transfer which provides cash to target populations. Conditions may be attached.

Chronic undernutrition: see stunting.

CMAM, or community-based management of acute malnutrition, is a cost-effective and efficient method for treating severe (and moderate) cases of acute malnutrition using ready-to-use foods. In patient care it is required for cases with medical complications; otherwise malnourished children (and adults) are supported through community-based systems.

CTC, or community based therapeutic care involves treating as many cases as possible of severe acute malnutrition, without clinical symptoms, as outpatients using ready-to-use therapeutic foods (RUTFs).

Complementary feeding is the process starting when breast milk alone or infant formula alone is no longer sufficient to meet the nutritional requirements of an infant, and therefore other foods and liquids are needed along with breast milk or a breast milk substitute. The target range for complementary feeding is generally considered to be 6–23 months.

Cretinism is a form of severe iodine deficiency disorder presenting as mental impairment. It is caused by iodine deficiency during critical periods of brain development.

DALY stands for disability adjusted life year. It is an estimate of the potential years of healthy life (and thereby economic productivity) lost due to ill-health and/or disability.

Diarrhoeal diseases cause diarrhoea (runny stools, with or without blood). The three most deadly diseases are: cholera, bacillary dysentery and typhoid.

DHS or demographic and health surveys are nationally representative household surveys conducted every five years or so.

Early warning system is an information system designed to monitor indicators that may predict or forewarn of impending food shortages or famine.

Emergency or humanitarian crisis is a situation requiring humanitarian assistance. The health, safety, security or well-being of a large group of people are under threat. A crisis stems from natural or man-made causes, is rapid or slow-onset, and of short or protracted duration.

Exclusive breastfeeding describes an infant feeding practice where only breast milk is given — no other liquids or solids. Drops or syrups of micronutrients or medicines may be given.

Food security describes the situation where people have physical and economic access to sufficient, safe, nutritious, and culturally acceptable food to meet their dietary needs at all times.

Fortification of food is the addition of micronutrients to food, during or after processing.

Goitre is an enlargement of the thyroid gland which becomes visible in the neck area. It can indicate iodine deficiency.

Growth monitoring involves the regular individual measurement of a child's growth (weight for age) and the plotting of results on a 'road to health' chart. The intention is to then use the visual depiction of a child's growth as a basis for dialogue with the mother/carer (hence the use of the term growth monitoring and promotion (GMP).

Hunger (or undernourishment) is used at population level to describe the situation when dietary intake is below minimum requirements (typically taken as an average of 2 100 kcal per person per day). Hunger is an outcome of food insecurity.

Incidence is defined as the number of new cases over a specified period of time.

Infant mortality rate is defined as the number of deaths of infants (aged less than 12 months) per 1 000 live births in a given population.

Infant and young child feeding (IYCF) describes the feeding practices for infants (aged less than 12 months) and young children (aged from 12 to 23 months).

Iodine deficiency (see also Goitre and Cretinism). A median urinary iodine concentration in a population of < 100 µg/l indicates that the iodine intake is insufficient. A population's median urinary iodine (UI) concentration should be at least 100 µg/l, with less than 20% of values < 50 µg/l. For pregnant women, the median urinary iodine should be 150–249 µg/l ([79]).

Cut-off values for public health significance

Indicator	Prevalence cut-off values for public health significance	
Iodine deficiency (median UI concentration µg/l)	< 20 µg/l	Severe deficiency
	20–49 µg/l	Moderate
	50–99 µg/l	Mild deficiency
	100–199 µg/l	Optimal
	200–299 µg/l	Risk of iodine-induced hyper-thyroidism
	≥ 300 µg/l	Risk of adverse health consequences

Source: WHO, 2008.

Kwashiorkor is a form of severe acute malnutrition, characterised by bilateral pitting oedema. Low weight-for-height may not be observed in cases of kwashiorkor where wasting is masked.

Livelihood comprises the capabilities, assets and activities required for a means of living. Households have different capabilities and assets, and adopt different livelihood strategies and activities to secure their livelihoods.

Malnutrition is a physical condition related to the body's use of nutrients. There are two forms of malnutrition: undernutrition and overnutrition. This paper focuses on undernutrition.

Maternal mortality ratio is the ratio of the number of maternal deaths per 100 000 live births. It is used as a measure of the quality of a healthcare system. WHO defines maternal death as the death of a woman whilst pregnant or within 42 days of termination/end of pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental causes.

Maternal undernutrition: BMI of less than 18·5 kg/m^2. Prevalence ranges from 10% to 19% in most countries. Above 20%, maternal undernutrition is serious; 40% is a critical situation.

MDG1: Eradicate extreme poverty and hunger. The third specific target is to reduce by half the proportion of people who suffer from hunger. The indicators for this are the prevalence of underweight children aged below 5 years and the proportion of the population below the minimum level of energy consumption.

Micronutrient deficiencies are the form of undernutrition related to vitamins and minerals. Deficiencies of iron, iodine, vitamin A and zinc are amongst the top 10 leading causes of death through disease in developing countries. Other deficiencies more specific to emergencies include thiamine, vitamin B, niacin and vitamin C deficiencies.

MICS or Multiple Indicator Cluster Survey is a Unicef initiative to assist countries in monitoring the situation of children and women — regarding health, education, child protection and HIV/AIDS. Surveys are undertaken in country every five years or so.

MUAC, or mid-upper arm circumference, is an anthropometric measurement used to assess nutritional status in children and adults.

Morbidity is the prevalence or incidence of disease.

Mortality, or death, is usually expressed as a rate in a population, specified for a particular group of people, such as infants, mothers during/after birth or under-5 children. Crude mortality rate encompasses an entire population group.

Nutrition is the science of how nutrients and other substances in food act and interact in relation to health and disease. Nutrition is also about the processes by which the body ingests, absorbs, transports, utilises and excretes food substances ([80]).

([79]) Ibid.

([80]) Lagua, Rosalinda, T., and Virginia, S., Claudio (1995), ***Nutrition and Diet Therapy Reference Dictionary***, New York, Chapman & Hall.

Nutrition security ([81]) is an outcome of good health, a healthy environment, good caring practices and household-level food security. A family (or country) may be food secure, yet have many individuals who are nutritionally insecure. Food security is therefore often a necessary but not sufficient condition for nutrition security.

Nutritional index is derived by relating an individual's body measurement with the expected value of an individual of the same height (or age) from a reference population. Weight-for-height is the nutritional index commonly used to reflect acute undernutrition (wasting) in emergency nutritional assessments.

Nutritional status is the physiological condition of an individual that results from the balance between nutrient requirements, intake and the ability of the body to use these nutrients.

Nutrition surveillance involves the regular collection of nutrition information to monitor the situation. Information is used for decisions about actions or policies that will affect nutrition.

Nutrition surveys are carried out to assess the severity and extent of undernutrition in a given geographical area. They can be conducted as occasional exercises or as part of regular monitoring.

Percentile describes the rank position of an individual on a given reference distribution, stated in terms of what percentage of the group the individual equals or exceeds.

Prevalence describes the percentage of a population with a specific characteristic or condition (such as undernutrition) at a particular time.

Public nutrition approach recognises that nutritional status is affected by a complex mix of factors and tends to include multiple avenues of intervention (rather than a single approach).

Reference population is based on surveys of healthy children, whose measurements represent an international reference for interpreting an individual's anthropometric status.

Selective feeding programmes include supplementary or therapeutic feeding programmes.

Stunting describes chronic undernutrition, characterised by low height compared to age (denoted as < – 2 Z scores of the median height-for-age according to WHO growth standards for children). The longer timescale over which height-for-age is affected makes it more useful for long-term planning and policy development, rather than for emergencies. Severe stunting is defined as a height-for-age index < – 3 Z scores below the median of the international reference population.

Supplementation is the provision of extra nutrients (micronutrients or energy/protein) in the form of food, tablets, capsules, syrup or powder.

Threshold can either refer to the nutritional status of an individual or the prevalence of undernutrition in a population group. The threshold below which nutritional status is associated with excess mortality is likely to vary with different environments. The following are established cut-off values.

Indicator	Prevalence cut-off values for public health significance	
Underweight	< 10%:	low prevalence
	10–19%:	medium prevalence
	20–29%:	high prevalence
	≥ 30%:	very high prevalence
Stunting	< 20%:	low prevalence
	20–29%:	medium prevalence
	30–39%:	high prevalence
	≥ 40%:	very high prevalence
Wasting	< 5%:	acceptable
	5–9%:	poor
	10–14%:	serious
	≥ 15%:	critical

Source: WHO (1995), pp. 208 and 212.

(81) Gross, R., et al. (1998), 'Community Nutrition: Definition and Approaches', *Encyclopaedia of human nutrition*, Ed. by M., Sadler, S., Strain and B., Caballero, London.

Under-5 mortality rate (U5MR) is the probability of a child dying before reaching the age of 5. U5MR is, strictly speaking, not a rate (i.e. the number of deaths divided by the number of population at risk during a certain period of time) but a probability of death derived from a life table and expressed as rate per 1 000 live births.

Undernutrition includes intrauterine growth restriction which leads to low birth weight, stunting, wasting and deficiencies of essential micronutrients. Undernutrition results from inadequate food consumption, poor absorption and/or impaired biological use of nutrients.

Underweight in children is defined as < – 2 Z scores of the median weight-for-age of WHO growth standards. Severe underweight is < – 3 Z scores. It includes children with low weight-for-height (wasting) or low height-for-age (stunting). Growth charts based on weight-for-age are used for growth monitoring in health programmes. Weight-for-age is less useful in emergencies, but can act as a proxy indicator for undernutrition if data on acute undernutrition are not available.

Vitamin A deficiency (see also Bitot's spots). The clinical diagnosis of vitamin A deficiency is based on the spectrum of eye conditions known as xerophthalmia, ranging from mild night blindness to corneal necrosis. The subclinical diagnosis is based on blood concentrations of retinol (the chemical name for vitamin A) in plasma or serum. A concentration of < 0.70 µmol/l indicates subclinical vitamin A deficiency in children and adults, and < 0.35 µmol/l indicates severe vitamin A deficiency.

Cut-off values for public health significance

Indicator	Prevalence cut-off values for public health significance	
Serum or plasma retinol < 0.70 µmol/l in preschool-age children	≥ 2% – < 10%	Mild
	≥ 10% – < 20%	Moderate
	≥ 20%	Severe
Night blindness in pregnant women	≥ 5%	Moderate

Source: WHO (2009), p. 8.

Vulnerability is the characteristics of a person or group related to their capacity to anticipate, cope with, resist and recover from the impact of a natural or man-made hazard. Vulnerability to undernutrition is conditional on the hazards of loss of access to food, appropriate nutritional care, or an inability to physiologically utilise available food because of infection or other disease.

Wasting (or 'marasmus') describes acute undernutrition characterised by low bodyweight compared to height (i.e. < – 2 Z scores of the median weight-for-height ([82]) according to WHO growth standards). Severe wasting is defined as a weight-for-height < – 3 Z scores of the median of WHO standards. Weight-for-height is recommended for assessments of recent nutrition, and is especially important for assessments of nutrition-related humanitarian emergencies.

Z score (or standard deviation score) is the deviation of the value for an individual from the median value of the reference population, divided by the standard deviation of the reference.

(82) Note that WFL is used for children under 85 cm (meaning children are measured when lying down); WFH is used for children measuring 85 cm and over (meaning they are measured when standing).

Annex 2: Countries bearing the burden of undernutrition

36 countries with ≥ 20% stunting, taking 90% of the world's burden of stunted children ([83]).

32 smaller high-burden countries, with rates of childhood stunting or underweight > 20% ([84]).

	Prevalence of stunting (%)	Insufficient or no progress towards MDG1 [85]	Integration of nutrition in PRSP [86] (period) classification	Nutrition governance [87]
Afghanistan	53.6		(2008–13) medium	Weak
Albania	26			
Angola	50.8			
Bangladesh	50.5	x	(from 2005) strong	Strong
Bhutan	48			
Bolivia	22			
Botswana	29			
Burkina Faso	43.1	x	(2004–6) medium	Strong
Burundi	63.1	x	(from 2006) weak	Medium
Cambodia	49.1		(2006–10) medium	Weak
Cameroon	35.4	x	(from 2003) weak	Medium
Central African Republic	43	x		
Comoros	44	x		
Congo	30			
Côte d'Ivoire	31.1	x		
Democratic Republic of the Congo	44.4	x	(2006–08) weak	Weak
Djibouti	33	x		
East Timor	54	x		
Ecuador	23			
Egypt	20.3	x		
Equatorial Guinea	43			
Eritrea	44	x		
Ethiopia	57.4	x	(from 2002) medium	Medium
Gambia	28	x		
Ghana	35.6		(2006–09) weak	Weak
Guatemala	59.9			
Guinea	40	x		
Guinea-Bissau	47			
Haiti	29	x		

(83) Black, et al. (2008), *The Lancet*'s Series.

(84) World Bank (2006), *Scaling Up Nutrition*; Stunting estimates for the 32 countries come from 2003–08 figures, presented in Unicef (2009), *Tracking Progress on Child and Maternal Nutrition.*

(85) Unicef (2009), *Tracking Progress on Child and Maternal Nutrition*.

(86) World Bank (2008), Poverty Reduction Strategies (http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTPOVERTY/EXTPRS/0,,menuPK:384207~pagePK:149018~piPK:149093~theSitePK:384201,00.html).

(87) Cited in SCN (2009), 'Landscape Analysis on Countries' Readiness to Accelerate Action on Nutrition', *SCN News*, No 37 (www.unscn.org/layout/modules/resources/files/scnnews37.pdf).

	Prevalence of stunting (%)	Insufficient or no progress towards MDG1 [85]	Integration of nutrition in PRSP [86] (period) classification	Nutrition governance [87]
Honduras	29			
India	51	x		
Indonesia	45.3			
Iraq	28.3	x		
Kenya	35.8	x	(2003–07) weak	Weak
Lesotho	42	x		
Liberia	39	x		
Madagascar	55.5	x	(2007–12) weak	Medium
Malawi	54.6	x	(2006–11) strong	Strong
Maldives	32			
Mali	42.7	x	(2007–11) weak	Weak
Mauritania	32	x		
Mongolia	27			
Mozambique	47		(2006–09) medium	Weak
Myanmar	40.6	x		
Namibia	29	x		
Nepal	57.1	x	(2002–07) weak	Medium
Niger	54.2	x	(2008–12) medium	Medium
Nigeria	43	x	(2003–07) weak	Strong
Pakistan	41.5	x	(from 2003) weak	Weak
Peru	31.3			
Philippines	37.8	x		
Rwanda	51	x		
São Tomé and Príncipe	29			
Sierra Leone	36	x		
Somalia	42	x		
South Africa	30.9	x		
Sri Lanka	18			
Sudan	47.6	x		
Swaziland	29			
Tajikistan	39			
Tanzania	48.3	x		
Togo	27	x		
Turkey	20.5			
Uganda	44.8	x	(2004–08) weak	Strong
Vietnam	42.4		(2006–10) weak	Strong
Yemen	59.3	x	(2003–05) weak	Weak
Zambia	52.5	x	(2006–10) medium	Medium
Zimbabwe	33	x		

Annex 3: Indicators

Definitions

Indicators are usually classified as follows ([88]).

- **Input indicators**: measure the financial, administrative and regulatory resources provided.
- **Process indicators:** assess the means or methods to achieve the desired results.
- **Output indicators**: measure the immediate and concrete consequences of the measures taken and resources used.
- **Outcome indicators** ([89]): measure the results in terms of target group benefits.
- **Impact indicators**: measure the long-term consequences of the outcomes.

The list of indicators is presented in two tables below:

- indicators of nutritional impact which are potentially relevant to all sectors;
- nutrition-specific indicators of input, output and outcome presented by thematic area.

Sources of further information

- WHO (2010), 'Country profile indicators: interpretation guide', *Nutrition Landscape Information System (NLIS)* (www.who.int/nutrition/nlis_interpretation_guide.pdf).
- IRD (2005), Nutrition indicators for development, (www.fao.org/docrep/008/y5773e/y5773e00.HTM).
- Demographic and Health Survey (www.measuredhs.com/aboutsurveys/dhs/start.cfm).
- Multi Indicator Cluster Survey (www.unicef.org/statistics/index_24302.html).
- WHO (2010), World Health Statistics, Indicator Compendium, interim version (www.who.int/whosis/indicators/WHS10_IndicatorCompendium_20100513.pdf).
- WHO, et al. (2008), *Indicators for assessing infant and young child feeding practices — Part 1 Definitions*
- (www.who.int/nutrition/publications/infantfeeding/9789241596664/en/index.html); and (2010), *Part II Measurement*
- (www.who.int/nutrition/publications/infantfeeding/9789241599290/en/index.html).
- FAO (2008), Guidelines for measuring household and individual dietary diversity, FANTA
- (www.foodsec.org/fileadmin/user_upload/eufao-fsi4dm/docs/guidelines_MeasuringHousehold.pdf).
- Reduction of micronutrient malnutrition publications (including guidance on indicators) (www.who.int/vmnis/publications/en/).
- Assessing countries' commitment to accelerate nutrition action demonstrated in poverty reduction strategy paper, UNDAF and through nutrition governance, ***SCN News***, No 37, 2009 (www.unscn.org/layout/modules/resources/files/scnnews37.pdf).
- Sphere (2011), Humanitarian Charter and Minimum Standards in Humanitarian Response (www.sphereproject.org/component/option,com_docman/task,cat_view/gid,70/Itemid,203).

(88) EC AID Delivery methods, project cycle management guidelines, p. 138.

(89) There is the potential for confusion over what is meant by a 'result': In the Commission's 'input -output-outcome-impact' typology, it would correspond to an 'outcome', such as primary school enrolment. The amount spent on primary education would be classified as an 'input'; the number of primary teachers trained would be an 'output', and literacy rates would be an 'impact'. Thus the terms 'result' and 'outcome' should be treated as synonymous.

Table 3a: Impact indicators

Impact indicator	Description	Sources	Interpretation: Strengths and weaknesses
Prevalence of stunting amongst children aged < 5 years	Proportion of children below 5 years with a height for age < – 2 Z scores (severe stunting < – 3 Z scores)	National surveys (DHS, MICS), ad hoc surveys	See glossary for cut-off values to assess severity in a population. Strong poverty indicator. The increased focus on children under 2 years might trigger/require disaggregating data beyond children under 5 years.
Prevalence of underweight in children aged < 5 years	Proportion of children below 5 years with a weight for age < – 2 Z scores (severe underweight < – 3 Z scores)	National surveys (DHS, MICS, others), growth monitoring data, ad hoc surveys	An MDG1 indicator, thus international goal. See glossary for cut-off values to assess severity in a population. Weight for age is non-specific as it cannot differentiate between stunting and wasting. Its composite nature makes interpretation complex. For example, weight for age fails to distinguish between short children of adequate body weight and tall, thin children.
Prevalence of wasting in children aged < 5 years	Proportion of children under 5 years of age with a weight for height < – 2 Z scores (severe wasting < – 3 Z scores)	National surveys (DHS, MICS, others), ad hoc surveys	See glossary for cut-off values to assess severity in a population. Good measure of short-term changes.
Prevalence of severe acute malnutrition (including oedema) in children < 5 years	Proportion of children < 5 years with a weight for height < – 3 Z scores and or with bilateral oedema		
Prevalence of low MUAC (6–59 months)	Proportion of children 6–59 months of age with a MUAC < 125 mm (severe: MUAC < 115mm)	National surveys, ad hoc surveys	Relatively easy to measure; strong mortality indicator.
Prevalence of low birth weight rate (LBW)	Proportion of (singleton) babies born < 2 500 g/total live births	National health information system; national surveys (DHS, MICS, others), ad hoc surveys	Also a proxy for maternal nutritional status (although LBW can be the result of premature birth). LBW is a determinant of mortality, morbidity during childhood and can have a long-term impact on adult health. Data is often poor in contexts where deliveries take place outside health facilities.
Prevalence of low body mass index in women of reproductive age	Proportion of non-pregnant women with a BMI < 18.5 kg/m² (severe malnutrition: BMI < 16 kg/m²)	National surveys, ad hoc surveys	Indicates chronic energy deficiency. Poor nutritional status in pregnant women can result in poor intra-uterine growth and LBW. See glossary for cut-off values to assess severity in a population.
Prevalence of overweight amongst women of reproductive age	Proportion of non-pregnant women with a BMI > 25 kg/m² (obesity: BMI > 30 kg/m²)		Overweight is a major determinant of non-communicable diseases such as diabetes and coronary heart diseases. A major growing public health concern in developing countries.

Impact indicator	Description	Sources	Interpretation: Strengths and weaknesses
Prevalence of iodine deficiency disorders (IODD)	Proportion of children aged 6–12 years with a median urinary iodine concentration in children below 100 µg/l (severe IODD: < 20 µg/l)	Ad hoc surveys	Urinary iodine (UI) is the main indicator and can be used in school-based samples. Goitre assessments may be useful but the prevalence is difficult to interpret once salt iodisation programmes are in place. See glossary for cut-off values to assess severity in a population.
Prevalence of children (2–5 years) suffering from vitamin A deficiency	Assessed by clinical signs called xerophtalmia (e.g. night blindness or Bitot spots) or biochemical measure concentration of retinol in plasma or serum below 0.70 µmol/l (severe deficiency < 0.35 µmol/l)	Health information system, surveys	Measuring serum retinol is expensive. See glossary for cut-off values to assess severity in a population.
Prevalence of pregnant or lactating women suffering from vitamin A deficiency			
Prevalence of anaemia in children aged 6–59 months	Proportion of children (6–59 months) or pregnant women with a haemoglobin level below 110 g/litre (severe anaemia < 100 g/l)	Health information system, surveys (e.g. MICS)	Assessment of haemoglobin concentration requires blood samples. See glossary for cut-off values to assess severity in a population.
Prevalence of anaemia in pregnant women			
Maternal mortality ratio (per 100 000 live births)	Annual number of female deaths from any cause related to or aggravated by pregnancy and childbirth or within 42 days of termination of pregnancy, per 100 000 live births	Civil registration with complete coverage, household surveys, population census, ad hoc studies	'Indirect' impact indicator as iron-deficiency anaemia and maternal short stature are implicated in one in five maternal deaths. MDG 5 indicator.
Infant mortality rate	Probability of dying between birth and age 1 year per 1000 live births		'Indirect' impact indicator as more than one third of child deaths are associated with undernutrition. MDG 4 indicator.
Under 5 mortality rate	Probability of dying between birth and age 5 years per 1 000 live births		

Table 3b: Input, output and outcome indicators

Indicator		Description	Sources	Interpretation: Strengths and weaknesses	Type
Nutrition and health					
Coverage of post-partum vitamin A supplementation		Proportion of women who receive a dose of vitamin A supplement within six weeks of delivery	Facility reporting system	Data are not always available.	Outcome
Coverage of vitamin A supplementation in children aged 6–59 months		Proportion of children (6–59 months) who received one or two doses of vitamin A supplements within one year	National surveys (e.g. DHS, MICS), ad hoc surveys	Supplementation may be done during immunisation campaigns. If so, immunisation and vitamin A indicators may overlap.	Outcome
Coverage of iron/folate supplementation in children 6–24 months or 6–59 months		Proportion of children (6–24 months or 6–59 months) receiving iron/folate supplements			Outcome
Coverage of iron/folate supplementation during pregnancy		Proportion of pregnant women who were given both iron and folic acid during pregnancy		Indicator of anaemia reduction strategy. Data are unavailable in many countries.	Outcome
Coverage of multiple micronutrients powder		Proportion of children receiving multiple micronutrients powder		At the time of writing, there are no readily available data and no internationally accepted standards.	Outcome
Coverage of therapeutic zinc supplementation alongside ORS, to manage diarrhoea		Proportion of children who were given zinc as part of the treatment for acute diarrhoea			Outcome
Treatment of severe acute malnutrition	Treatment coverage	Proportion of children suffering from severe acute malnutrition under treatment (alternative: admitted in a treatment programme)	Ad hoc coverage surveys	In the absence of (national) coverage data, indicators of treatment capacity can be considered.	Outcome
	Treatment capacity	Proportion of health facilities with functioning inpatient and/or outpatient care	Facility reporting system, NGO/UN information systems		Output
		Proportion of healthcare providers trained and active in severe acute malnutrition management			Output
		Existence of a supply (e.g. RUTF stocks) management system at central and facility levels			Input
Health workers trained in nutrition		Number of training sessions Number of health workers trained in last six months	Curriculum, school registers	Training does not mean implementation; it is simply a required step.	Output

Indicator	Description	Sources	Interpretation: Strengths and weaknesses	Type
Early initiation of breastfeeding	Proportion of children born in the last 24 months put to the breast within 1 hour of birth	National surveys (DHS, MICS, others), ad hoc surveys		Outcome
Children ever breastfed (under 2 years of age)	Proportion of children born in the last 24 months breastfed at any time			Outcome
Exclusive breastfeeding	Proportion of infants aged 0–6 months fed exclusively with breast milk		Key indicator, as exclusive breastfeeding in the first 6 months of a child's life is one of the most effective ways to ensure health and survival.	Outcome
Breastfeeding is continued through first 12 months of life	Proportion of children 12–15 months of age who received breast milk during the previous day			Outcome
Adequate introduction of complementary food	Proportion of infants 6–8 months receiving solid, semi-solid or soft foods			Outcome
Minimum meal frequency (6–23 months)	Proportion of breastfed and non-breastfed children 6–23 months of age who received solid, semi-solid, or soft foods (including milk feeds for non-breastfed children) the minimum of times (*) or more during the previous day (*) e. g. two times for breastfed infants 6–8 months, three times for breastfed children 9–23 months		A proxy for energy intake from foods other than breast milk.	Outcome
Minimum dietary diversity (6–23 months)	Proportion of children 6–23 months of age who received foods from four or more food groups during the previous day		Proxy of the nutrient (mainly micronutrient) adequacy of the diet.	Outcome
Minimum acceptable diet (6–23 months)	Proportion of breastfed children 6–23 months of age who had at least the minimum dietary diversity and the minimum meal frequency during the previous day Proportion of non-breastfed children 6–23 months who received two milk feedings and had at least the minimum dietary diversity not including milk feeds and the minimum meal frequency during the previous day			Outcome
Individual dietary diversity score (24–59 months)	Dietary diversity scores are defined as the number of food groups consumed by an individual over a reference period (usually 24 hours).	Ad hoc surveys	IDDS is a proxy of the nutrient (mainly micronutrient) adequacy of the diet. Low level of the indicator indicates poor dietary diversity (the opposite is not warranted).	Outcome
Individual dietary diversity score (women of reproductive age)				Outcome

	Indicator	Description	Sources	Interpretation: Strengths and weaknesses	Type
Health indicators particularly relevant to nutrition	Prevalence of children (0–59 months) with diarrhoea who received oral rehydration therapy and continued feeding	Proportion of 0–59 months who had diarrhoea and were treated with oral rehydration salts or an appropriate household solution and continued feeding during the episode of diarrhoea	Surveys (DHS, MICS), facility reporting system	Part of a strategy to increase nutrients absorption.	Output
	Coverage of deworming (12–59 months)	Proportion of children (12–59 months) receiving deworming			Output
	Measles vaccination coverage	Proportion of 1-year-olds who have received at least one dose of measles vaccine in a given year		Also a proxy indicator of health system performance. MDG 4 indicator.	Output
	Antenatal care coverage	Proportion of women aged 15–49 years with a live birth that received antenatal care: (1) at least four times by any provider, (2) at least once by skilled personnel.		MDG 5 indicator.	Input
	Infants weighed at birth	Proportion of last live births who were weighed at birth		Proxy for access to maternal and child health services. Informs the interpretation of the low birth weight indicator (i.e. if very few children are weighed at birth, LBW will not be representative). MDG 5 indicator.	Input
	Births attended by skilled health personnel	Proportion of live births attended by skilled health personnel in a given period			Input
Nutrition and water, sanitation and hygiene					
Place for hand washing		Proportion of households with designated place for hand washing where water and soap are present	Household surveys, MICS, DHS, population census		Input
Availability of soap		Proportion of households with soap anywhere in the dwelling			
Use of improved drinking water sources		Proportion of population using improved sources of drinking water		MDG7 indicator.	
Use of improved sanitation facilities		Proportion of population using improved sanitation facilities			
Safe disposal of child faeces		Proportion of children 0–2 years whose (last) stools were disposed of safely			
Average water use for drinking, cooking and personal hygiene in any household is at least 15 litres per person per day			Emergency assessments	Sphere indicator.	Input
The maximum distance from any household to the nearest water point is 500 metres					
Queuing time at a water source is no more than 30 minutes					
All affected people drink water from a protected or treated source in preference to other readily available water sources					
The environment where all affected community members are living is free from human faeces					
Toilets are appropriately designed, built and located					

Indicator	Description	Sources	Interpretation: Strengths and weaknesses	Type
Nutrition and education				
Literacy rate among young women	Proportion of women age 15–24 years who are able to read a short simple statement about everyday life or who attended secondary or higher education	Surveys (e.g. MICS, DHS)	MDG 2 indicator. Indicator of school attendance and academic attainment.	Output
Secondary school net attendance ratio (adjusted) for girls	Proportion of girls of secondary school age currently attending secondary school or higher		Indicator of school attendance and academic attainment.	
Nutrition in the curriculum		Curriculum		Input
Nutrition and gender				
Adolescent fertility rate	Annual number of births to women aged 15–19 years per 1 000 women in that age group	Surveys (e.g. MICS, DHS)	High rate of early pregnancy is an indicator of low care for women. It is a risk factor of low birth weight.	Outcome
Interval between pregnancies	Proportion of non-first births that occur with an interval of 24 months or more after the previous birth Median birth interval		Short interval between pregnancies is an indicator of low access to family planning and low care for women.	Outcome
Individual dietary diversity score among women of childbearing age		See above		Outcome
Births attended by skilled health personnel	Proportion of live births attended by skilled health personnel in a given period	Surveys (DHS, MICS), facility reporting system	Proxy for access to maternal and child health services. Informs the interpretation of the low birth weight indicator (i.e. if very few children are weighed at birth, LBW will not be representative). MDG 5 indicator.	Output
Nutrition and social protection				
Minimum dietary diversity (6–23 months)		See above		Outcome
Minimum meal frequency (6–23 months)				
Minimum acceptable diet (6–23 months)				
Individual dietary diversity score (24–59 months)				
Individual dietary diversity score (women of reproductive age)				
Consumption of iron-rich or fortified foods (6–23 months)	Proportion of children aged 6–23 months receiving an iron-rich/fortified food that is specially designed for infants and young children or that is fortified at home with a product that included iron during the previous day	National surveys (DHS, MICS, others), ad hoc surveys		Outcome
Additional household level indicators particularly relevant to nutrition: indicators of households' purchasing power, access to food, ability to meet basic needs and proportion of expenditure on food.				

Indicator	Description	Sources	Interpretation: Strengths and weaknesses	Type
Nutrition, food security and agriculture				
Minimum dietary diversity (children aged 6–23 months)		See above		Outcome
Minimum meal frequency (6–23 months)				
Minimum acceptable diet (6–23 months)				
Individual dietary diversity score (children aged 24–59 months)				
Individual dietary diversity score (women of reproductive age)				
Consumption of iron-rich or iron-fortified foods (6–23 months)				
Iodisation of salt	Proportion of households consuming salt tested at 15 parts per million of iodine (measures of production, availability of iodised salt could also be considered, as relevant).			Outcome
Iron fortification of foods				Outcome
Additional household level indicators of food security particularly relevant to nutrition: indicators of households' purchasing power, access to food and proportion of expenditure on food.				
Nutrition and governance				
Inclusion/prioritisation of nutrition in national framework	Composite indicator ([90]): recognition of undernutrition as a development problem, use of nutrition information to analyse poverty and support appropriate policies, strategies and programmes.	PRSP or national strategic framework	See scoring system for this composite indicator in further reading under the WHO Landscape analysis.	Input
Nutrition governance	Composite indicator: existence of an inter-sectoral mechanism for nutrition, existence and status of nutrition strategy/policy/plan, etc.	Government	See scoring system for this composite indicator in further reading under the WHO Landscape Analysis.	Input
Nutritional objectives in sectoral policies and contingency/emergency preparedness plans		Policies on agriculture, emergency, employment, etc.		Input
Existence of nutrition information systems	Nutrition surveillance system and early warning system	Government		Output
Staff other than health trained in nutrition		Curriculum		Output
Violations of the code on marketing of breast-milk substitutes monitored and reported			Sphere indicator.	

(90) Composite indicators can be broken down and do not necessary need to be used in their entirety.

Indicator	Description	Sources	Interpretation: Strengths and weaknesses	Type
Nutrition and human rights				
Right to food	Right to food included in scope of work of human rights commission or office			Outcome
Human rights and child rights, including food, health, etc., promoted at community level				Outcome
Employment rights	Non-discrimination and fair pay in employment legislation and practices			Output
Land rights (e.g. for women, marginalised groups)				Output
Women's rights				Output
Water rights	With a specific focus on poor households and women			Output
Refugee and humanitarian law in protracted crises				Output

Annex 4: Ten steps to successful breastfeeding[91]

Every health facility providing maternity services and care for newborn infants should:

(1) **have a written breastfeeding policy that is routinely communicated to all healthcare staff;**

(2) **train all healthcare staff in skills necessary to implement this policy;**

(3) **inform all pregnant women about the benefits and management of breastfeeding;**

(4) **help mothers initiate breastfeeding within half an hour of birth;**

(5) **show mothers how to breastfeed, and how to maintain lactation even if they should be separated from their infants;**

(6) **give newborn infants no food or drink other than breast milk, unless medically indicated;**

(7) **practice rooming-in — allowing mothers and infants to remain together 24 hours a day;**

(8) **encourage breastfeeding on demand;**

(9) **give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants;**

(10) **foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.**

(91) WHO/Unicef (1989), *Protecting, Promoting and Supporting Breastfeeding: The Special Role of Maternity Services,* a joint WHO/Unicef Statement (www.unicef.org/newsline/tenstps.htm).

Annex 5: Health-related interventions effective for nutrition[92]

The list of interventions below is drawn from *The Lancet*'s Series on Maternal and child undernutrition (2008); the World Bank's: *Scaling Up Nutrition — What will it cost?* (2010); and *Scaling Up Nutrition — A framework for Action* (2010), which was signed by a range of stakeholders working in nutrition.

Black: indicates evidence for implementation in countries with a high burden of undernutrition

Orange: indicates evidence for implementation in specific contexts

(*) in addition to *The Lancet*'s Series list

(**) in partnership with other sectors

	Cost-Effectiveness [93] (USD per DALY averted)	Cost Estimate [94] (USD)
Nutrition-specific interventions		
Promoting good nutritional practices		
Breastfeeding	3–11	USD 5–15/year (included in a community nutrition programme)
Complementary feeding for infants older than 6 months		
Improved hygiene practices, including hand washing	3	
Increasing intake of vitamins and minerals		
Periodic vitamin A supplements (6–59 months)	6–12	USD 1.2/child/year
Therapeutic zinc supplements in diarrhoea management	73	USD 1/child/year
Multiple micronutrients powder (6–23 months) (*)		USD 1.8–3.6/child/year
Deworming in children (to reduce nutrient losses)		USD 0.25/child/year
Iron-folic acid supplements for pregnant women		USD 2/pregnancy
Maternal iodine supplements/iodised oil capsules		USD 2.16/person/year
Salt iodisation (**)	34–36	USD 0.05/person/year
Iron fortification of staple food [95](**)	66–70	USD 0.2/person/year
Therapeutic feeding for malnourished children with special foods		
Prevention/treatment of moderate undernutrition (6–23 months)		USD 40–80/child/year (using fortified foods)
Treatment of severe acute undernutrition with ready-to-use therapeutic foods		USD 200/child/episode (community-based management)
Other health interventions		
Intermittent preventive treatment for malaria		
Insecticide-treated bed nets	11 (sub-Saharan Africa)	
Reducing tobacco consumption or indoor air pollution		
Delayed cord clamping		
Related interventions		
Conditional cash transfers with nutrition components		USD 156–432/household/year

Some interventions recommended by *The Lancet*'s Series have not been included as there are no cost-estimates available (e.g. preventive zinc supplements, maternal calcium supplements, maternal micronutrient supplements, maternal supplements of balanced energy/protein).

(92) Unicef 2009, tracking progress on child and maternal nutrition.
(93) DFID, 2010.
(94) World Bank, 2010.
(95) *The Lancet*'s Series cites evidence for implementation in specific contexts, but World Bank, 2010, suggests: 'Given the high prevalence of iron deficiency anaemia and low costs of iron fortification, a wider application is justified'.

Annex 6: Nutrition situation analysis

Note: *Italics* denote explanations/sections to be completed according to specific circumstances

1. Background

When taking action on nutrition, the starting point should be to undertake an analysis of the local nutrition situation and its determinants, including household food security, poverty and social issues. This analysis should form the basis for national policies, legislative frameworks and strategies that make the best use of local resources. Policy guidance and technical documentation on international norms already established can facilitate policy design and choice of implementation strategy.

(Give a brief overview of the country, its current socio-political situation, nutrition situation and government responses and/or other donors, in the field of nutrition.)

2. Objectives

The main objective of the nutrition situation analysis is to identify and assess the situation in order to:

- better understand the nutrition problem — levels, trends, people worst affected, causes, etc.;
- better understand the country's involvement in nutrition;
- better design an appropriate response within the cooperation objectives/strategies;
- provide decision-makers in the partner country clear information on the nutrition situation and raise awareness.

The situation analysis describes the key links between nutrition and poverty reduction. It helps focus political dialogue and cooperation with the country on key areas of concern as well as raising awareness among policymakers.

It constitutes an important source of baseline information to provide a basis for discussion, justification, priorities for action and provide a benchmark against which to measure future trends in nutrition, essential for evaluating the results of the action taken, and for making improvements to on-going programmes.

3. Results

The nutrition situation analysis delivers the following results.

- An assessment of the key nutrition factors and trends:
  - *nature, trends, severity and distribution of maternal and child malnutrition problems*.
- An assessment of the main links between nutrition and human development, in its multiple dimensions (income, consumption, health, security, vulnerability, etc.).
- An assessment of national nutrition policy, institutional structures and capacity, and the involvement of civil society in nutrition issues:
  - *commitment to resolve these problems,*
  - *capacity to resolve these problems*.
- An overview of past and ongoing national and international cooperation in the field of nutrition.

4. Issues to be assessed

4.1 Country nutrition factors and trends

This chapter identifies the state and trends of key nutrition issues in the country (see further reading below).

As appropriate, reference should be made to nutritional indicators that could be used for monitoring changes in the studied country. To the extent that data are available, trends in MDGs 1, 4 and 5 ([96]) indicators should be provided; trends in additional indicators related to country-specific nutrition issues can also be provided, as available, to highlight those that are significant.

(96) www.undp.org/mdg

The concluding paragraphs should summarise the main problems identified: which nutritional conditions are causes of concern and what their prevalence is (e.g. stunting, wasting, obesity), described in terms of situations or trends. The information could be organised according to eco-geographical subdivisions as well as administrative boundaries.

Sources of further information

- Unicef (2009), Tracking progress on child and maternal nutrition, A survival and development priority, (www.unicef.org/nutrition/index_51688.html).
- WHO (2009), World Health Statistics, (www.who.int/whosis/whostat).
- Unicef (2009), Inter-agency Group for Child Mortality Estimation (IGME), ChildInfo, (www.childinfo.org/mortality_igme.html).
- World Bank (2009), Health, Nutrition and Population Statistics, HNP statistics, (http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTHEALTHNUTRITIONANDPOPULATION/EXTDATASTATISTICSHNP/EXTHNPSTATS/0,,print:Y~isCURL:Y~contentMDK:21187239~menuPK:3342157~pagePK:64168445~piPK:64168309~theSitePK:3237118,00.html) (http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTHEALTHNUTRITIONANDPOPULATION/EXTDATASTATISTICSHNP/EXTHNPSTATS/0,,contentMDK:21563582~menuPK:3385544~pagePK:64168445~piPK:64168309~theSitePK:3237118~isCURL:Y,00.html).
- Unicef (2009), The State of the World's Children, statistics, (www.unicef.org/rightsite/sowc/statistics.php).

4.2 Country nutrition key issues and causes

The main key issues in terms of nutrition and major causes of malnutrition should be identified, assessing the three broad levels of nutritional status: immediate, underlying and basic, using *The Lancet* conceptual framework (see **Figure 5**).

The concluding paragraphs should set out the key issues deriving from malnutrition (e.g. decline in active workforce, reduced performance at school). The main links between nutrition and human development (in its multiple dimensions: income, consumption, health, security, vulnerability, etc.) should be highlighted, in the form of a nutrition causal model.

4.3 National nutrition policy, institutional structures and capacity

A brief description and review of the strengths and weaknesses of the following aspects should be provided, with their associated evaluation criteria shown below for guidance.

Aspect	Evaluation criteria
Policies ([97])	Existence of national policies, strategies and action plans. Important measures taken by the government to solve nutritional concerns and types of policy instruments used for implementation. Effectiveness in achieving targets.
Institutions with nutrition responsibilities	Identity, number and quality of institutions (involved in policymaking, planning, monitoring and enforcement). Level of coordination and decentralisation. Strength and capacity of individual institutions. Influence on other institutions. Good governance practices. Capabilities, means, functioning of nutrition-related services (health, agriculture, water/sanitation, education). Major NGOs, institutes or other organisations involved in nutrition programme or policy.
Public participation	Transparency and access to information. Role of NGOs and civil society in nutrition-related issues 'decision-making. Effective participation. Participation by women and traditionally less-represented groups.

[97] Note: Climate-related policies and strategies may be described here but are also covered in more detail in Section 4.4.

Services and infrastructures	Health and agriculture services: number, areas, relevance, and effectiveness. Sanitation and waste infrastructure. Nutrition education at school (curricula). Emergency response mechanisms.
Nutrition monitoring system	Relevance of selected indicators (with reference to MDG1, 4 and 5). Measurement of the indicators: periodicity, liability. Integration in the general development indicators.

This section should briefly review the past and current steps taken by the government to tackle malnutrition. Where information is available, the impacts or potential risks of past or ongoing actions should be identified for the benefit of future programmes. The results of existing evaluations/reviews should be summarised.

4.4 Integrating nutrition concerns into the main policies and sectors

The assessment should examine the integration of nutrition concerns in the overall development policy and in sectors/areas that have key links with nutrition issues and which may be identified for support, taking into account the options for future cooperation. This section should examine whether there is a nutrition assessment for the national development strategy or the poverty reduction strategy and for the sectors of interest. The main legislation and institutional arrangements and measures of the sector which address nutrition issues should be examined.

4.5 Government's response to malnutrition

Based on the results of Section 4.3, this section should briefly review the past and current steps taken by the government to tackle malnutrition. Where information is available, the effectiveness of past or ongoing actions should be evaluated for the benefit of future programmes. The results of existing evaluations/reviews should be summarised.

4.6 Stakeholders' response to malnutrition

This section should review the past and current involvement of donors (in particular EU Member States, but other significant donors should also be included) and their experience in the country, and should include a list of recent and planned projects/programmes with a focus or anticipated impact on nutrition. It should assess the mechanisms to coordinate between donors on issues of nutrition.

5. Conclusions and recommendations

The conclusion should identify, as clearly as possible, the key aspects of nutrition factors and trends in the country, including policy, regulatory and institutional constraints and challenges. They may be presented in a matrix, comparing nutrition concerns and the main sectors or policies.

Based on a comprehensive assessment of available information and on consultations with stakeholders, conclusions and recommendations should be formulated on how the government and stakeholders can best address the identified nutrition challenges, taking into account current action and any pre-identified options for future cooperation. Conclusions and recommendations should feed into the country analysis, response strategy and possibly the identification of focal cooperation sectors ([98]). They should address (but not necessarily be limited to) the following aspects:

(1) rationale for considering nutrition in areas of cooperation, in order to address nutrition constraints and opportunities as appropriate — safeguards may include, for example, proposals for institutional strengthening and capacity building;

(2) recommendations to ensure that nutrition concerns are taken into consideration when identifying new projects and programmes in different cooperation sectors — information gaps preventing this work from being accomplished should be identified;

(3) opportunities for coordination on nutrition issues with other donors, seeking to achieve complementarities and synergies in order to more effectively deliver development objectives;

(4) proposals for nutrition-relevant indicators to be considered during the formulation of cooperation actions — the proposed indicators should be chosen taking account of the availability of data and actual capacity to monitor their evolution.

(98) Taking into account that other factors intervene in the choice of cooperation sectors, including past cooperation areas and the 'division of labour' between development partners in the context of the Paris Declaration.

Individual recommendations should be clearly articulated and linked to the problems to be solved and grouped according to the sector concerned or institutional stakeholder. The relative priority of the recommendations and an indication of the challenges to their implementation should be given.

6. Work plan

The work plan should include, but not necessarily be limited to, the following activities:

- consultations with relevant officials, stakeholders involved in nutrition issues and a selection of national and local authorities, key national and international civil society actors operating in nutrition-related field;
- review of key documents and reports, including relevant national documents; evaluation reports, existing assessments (particularly those concerning potential focal sectors); nutrition or nutrition-related policies, information on monitoring and nutrition indicators;
- field visits to sites of key nutrition concern and (if possible) the organisation of a national workshop for national authorities, development partners, experts and representatives of civil society, with the aim of clarifying and validating key nutrition concerns;
- a detailed work plan should be proposed on the basis of the outline work plan and time schedule given in these terms of reference.

7. Expertise required

The proposed mission should be conducted by a team of (two) experts with the following profile:

- expert level I or level II — team leader — with at least 10 years experience in nutrition, including institutional aspects; international policies; nutrition assessments and experience in rapidly assessing information and developing recommendations;
- expert level II with 10 years experience and with a nutrition background complementary to the team leader;
- previous working experience in the country/region is requested for at least one team member;
- experience in undertaking nutritional analyses and preparing development programmes is an asset;
- experience of participatory planning processes and gender awareness is an advantage.

The experts should have excellent skills in … and …. (knowledge of … is an asset). … will be the working language and the final report must be written in ….

8. Reporting

The results of the study should be presented in the format given in Section 10 of these ToR. The draft situation analysis, in (*number*) hard copies and electronic version (Microsoft Word), should be presented to (…) by (date) at the latest. Within () weeks, comments on the draft report will be received from the contracting agency. The consultants will take account of these comments in preparing the final report (maximum 40 pages excluding appendices). The final report in (*language*) and (*number*) copies is to be submitted by (*date*).

9. Time schedule (example)

	Expert I	**Expert II**
Desk analysis, briefing to the team leader	5	2
Field phase including travel and possible workshop	20	20
Report finalisation	3	2
Debriefing in (*place*) — not later than (*date*)	1	
Final report end (*date*)	1	1
Total days	30	25

10. Report format for a nutrition situation analysis

Maximum length (excluding appendices): 45 pages.

The following text appears on the inside front cover of the report:

> This report is financed by (*name of the contracting authority*) and is presented by (*name of consultant*) for the … (*national institution*). It does not necessarily reflect the opinion of …

1. Summary

> The summary should succinctly and clearly present the key issues described in the report following the order of headings 2 to 6 given below. The summary should not exceed six pages.

2. Country nutrition factors and trends

3. Country nutrition key issues and causes

4. National nutrition policy, institutional structures and capacity

5. Government's response to malnutrition

6. Stakeholders' response to malnutrition

7. Conclusions and recommendations

8. Technical appendices

(i.) Nutrition map of the country

(ii.) Reference list of nutrition-related policy documents, statements and action plans, and other relevant technical information

9. Other appendices

(i.) Study methodology/work plan (1–2 pages)

(ii.) Consultants' itinerary (1–2 pages)

(iii.) List of persons/organisations consulted with their affiliation and contact details (1–2 pages)

(iv.) List of documentation consulted (1–2 pages)

(v.) *Curricula vitae* of the consultants (1 page per person)

(vi.) Terms of reference for the nutrition situation analysis

Annex 7: Terms of reference for evaluating programmes for nutrition outcomes

Note: *Italics* denote explanations/sections to be completed according to specific circumstances

1. Background section

Describe the nutrition environment of the country/region, the rationale and objectives of the programme, its main activities/services, institutional arrangements and timeframe.

Nutrition and nutrition-related programmes all too often fail to meet their objectives — usually because they are based on a weak understanding of the main causes of undernutrition, are poorly supervised and managed, and are inadequately financed.

Evaluating programmes/projects with nutrition outcomes requires understanding the undernutrition problem and associated causes in the context of the area(s) targeted. This should be based on a nutrition situation analysis (see **Annex 6** for details) determining the immediate and underlying causes and identifying the most appropriate responses. The required programme activities and inputs should follow on from this, and indicators of project efficiency and effectiveness be chosen.

The project/programme needs to include plans for future evaluation. This will be based on indicators built in to the design of the monitoring system, which span four levels: inputs, outputs, outcomes and impacts.

- Input indicators **measure the financial, administrative and regulatory resources provided**. These include items to be delivered such as food, micronutrient supplements, equipment and training of project personnel.
- Output indicators measure the immediate and concrete consequences of the measures taken and resources used, such as the number of pregnant and lactating mothers who received a cash transfer.
- Outcome indicators measure the results in terms of target group benefits, such as the improved diet of children as a result of a cash transfer.
- Impact indicators measure the long-term consequences of the outcome. For nutrition, impact is usually assessed by measuring change in nutrition status using anthropometric or indicators of micronutrient status.

There may well be broader benefits that emerge because the impacts combine with other factors in an anticipated way. Similarly, there may be unintended negative consequences that also need to be examined (i.e. increased workload for women hence less time to care for the children).

2. Evaluation objectives

Present the type of evaluation (process or impact) plus the general and specific objectives e.g. coverage, improvements in nutritional status, increased wealth, diversified diet, improved knowledge about childcare and feeding practices or reduction/eradication of specific micronutrient deficiencies.

Evaluations look at the relevance, efficiency and effectiveness of the programme in contributing to achieving sustainable nutrition-relevant impacts. Recommendations are also included to feed into current programme design or future plans or policies.

One of the major difficulties in evaluating nutrition-relevant programmes is attributing any changes (outcomes) to specific inputs as other external factors may have had a role.

Depending on the type of evaluation, the following should be explored:

Process evaluation

- Assess the quantity, quality, timeliness and adequacy of programme inputs.
- Verify that inputs were transformed, through activities, into outputs that generated results.
- Examine targeting criteria and their application.
- Identify any operational constraints to programme effectiveness, giving recommendations.
- Determine whether a process or service meets national or international standards.
- How did the programme stakeholders contribute to the programme outcomes when the programme was being implemented?

Impact evaluation

- Determine what effect the programme had on the target population and whether the effects are justifiably attributed to the interventions or to extraneous factors. Were the outcomes/objectives met? Were the needs met?

- Assess either positive or negative benefits on the community.
- Take account of any factors that threaten the validity of the programme — such as spill-over, substitution or selection bias. Have the needs changed?
- Analyse the timeliness and time-frame of the programme.
- How effective were the strategies and systems used in the programme?
- What is the level of participation of various stakeholders?
- What lessons have been learned from the project/programme?
- What changes would have occurred in the absence of the programme and what changes are actually results of the programme?
- Are there other external factors influencing any changes seen?

3. Indicators and expected outcomes

Outline the indicators that should be used.

Process evaluation

In order to determine whether the intervention is being implemented as intended, barriers to effective implementation need to be identified and strategies designed to overcome them.

The following are examples of indicators that can be incorporated in process evaluations.

- Performance targets
- Intermediate inputs and outputs that play a central role in the implementation process (e.g. number of home visits by community workers, nutrition demonstration sessions, community participation, distribution of foods or micronutrients)
- Administrative data; poverty levels; prevalence estimates of malnutrition and diseases among children; coverage and targeting of other existing nutrition programmes
- Monitoring data and end-user satisfaction surveys: proportion of communities/families targeted by the programme that actually participate, the socioeconomic background of these families, characteristics of those who dropped out, access to and quality of services.

Impact evaluation

The next step, when assessing programme performance, is to draw credible conclusions about its causal effects on a target population. To establish the effect of an intervention, indicators that match the project's purpose and design need to be carefully selected (**Annex 3** provides a useful reference for this).

In addition, the ToR can set out a range of expected outcomes. For example, programme designers may argue that after two years of implementation, the rate of malnutrition in the target population should have decreased by x%.

Cost-benefit analysis

Rigorous cost information allows comparisons to be made of different interventions and informs policy-makers of the financial feasibility of scaling up programmes. Key aspects to guide the identification and estimation of the costs (or savings) and benefits within the context of evaluations are:

- savings of resources devoted to neonatal care;
- savings of resources devoted to the treatment of illnesses related to low birth weight;
- reduced costs associated with lower morbidity among young children;
- increased productivity due to improved health status and better cognitive and motor skills.

4. Evaluation methods

Present the evaluation methods and specify why this specific method ill be used.

The ToR should establish certain minimum standards for the methods to be employed in the evaluation. Furthermore, it should identify key information required to undertake the evaluation — in terms of primary data (sample size, sampling methods, level of precision, power, etc.) or secondary data (censuses, household surveys, etc.) as well as the characteristics necessary to conduct a survey.

An evaluation must employ data collection and analysis procedures that provide useful and valid information on the effects of a project. The evaluation design (which needs to be developed prior to project initiation, permitting collection of baseline data), should include the collection of information on both participant and control groups.

5. Deliverables

Present the expected result of the evaluation using the 5 evaluation criteria (relevance, effectiveness, efficiency, impact, sustainability), as defined by the Organisation for Economic Cooperation and Development (OECD) ([99]). *Specify the types of analyses required, the datasets and the number of reports to be delivered both during and at the end of the assessment.*

Periodic evaluations are necessary to draw conclusions about the effects of the project on target populations. Evaluation results should serve to determine the extent to which desired changes in term of nutrition have occurred, and whether the project is responsible for such changes. The information presented should allow those who plan, implement and fund projects with nutrition objectives to make sound judgements on the future of the project.

6. Evaluation team

Specify the minimum qualifications, experience and expertise required for each member of an external evaluation team.

Possible roles include:

- **an evaluation director,** responsible for coordinating the planning and implementation of the evaluation and supervising the team;
- **a nutritionist,** to provide technical expertise and help develop strong recommendations;
- **other resource people,** including project/programme staff members, social scientists or a statistician.

The evaluation team would need to refer to a small (internal) group who will be responsible for planning, supervising, and analysing evaluation information.

7. Time schedule

Define dates and deadlines for all the activities to be accomplished by the evaluation.

[99] OECD, Development Assistance Committee (DAC), Evaluating development cooperation: Summary of key norms and standards (www.aideffectiveness.org/media/k2/attachments/41612905.pdf).

8. Report format

Title

The following text appears on the inside front cover of the report:

This report is financed by (*name of the contracting authority*) and is presented by (*name of consultant*) for the … (*national institution*). It does not necessarily reflect the opinion of…

Acknowledgments

Contents

List of tables

List of figures

List of abbreviations

List of definitions

1. Executive Summary

A summary of the key issues, structured under the report's headings (2 to 5 below)

2. Introduction

Background to the evaluation

Programme description

Literature review (programme documents)

Evaluation objectives

Evaluation questions and subquestions

3. Methodology

Evaluation design

Data collection methods used

Methods of data analysis

4. Findings

Data presentation and description

5. Conclusions and recommendations

Bibliography

Appendices

Map of the evaluation site or area

Further details on methodology, data collection and analytical instruments used

List of people contacted

List of organisations or institutions visited

List of team members

Timetable of evaluation

Other detailed findings or results

Letters related to the programme or evaluation

Sources of further information

- World Bank (1999), 'Monitoring and Evaluation. A Guidebook for Nutrition Project Managers in Developing Countries', Human Development Network, Sept 1999 (http://siteresources.worldbank.org/NUTRITION/Resources/Tool8-fulltext.pdf).
- OECD, Development Assistance Committee (DAC), Evaluating Development Cooperation. Summary of Key Norms and standards (www.aideffectiveness.org/media/k2/attachments/41612905.pdf).
- University of Nairobi School of Nutrition Science and Policy (2000), 'Monitoring and evaluation of nutrition and nutrition-related programmes. A training manual for programme managers and implementers', *The Applied Nutrition Programme*, Tufts University, August 2000 (www.globalhealthcommunication.org/tool_docs/63/m&e_training_manual.pdf).
- Sphere (2011), Humanitarian Charter and Minimum Standards in Humanitarian Response (www.sphereproject.org/component/option,com_docman/task,cat_view/gid,70/Itemid,203).

European Commission

Reference Document N°13: Addressing undernutrition in external assistance – An integrated approach through sectors and aid modalities

Luxemburg: Publications Office of the European Union

2011 – 98 p. – 21 x 29.7 cm

ISBN 978–92–79–16974–8

How to obtain EU publications

Our priced publications are available from EU Bookshop (http://bookshop.europa.eu),

where you can place an order with the sales agent of your choice.

The Publications Office has a worldwide network of sales agents.

You can obtain their contact details by sending a fax to (352) 29 29-42758.

This document belongs to the **"Tools and Methods series"** launched by EuropeAid in 2007. This collection aims to structure the presentation of the methodological documents produced by Directorate on "Quality of Operations". The collection includes three sub-collections: Guidelines, Reference Documents and Concept papers. Other titles in this collection include:

Guidelines

- Guidelines (n°1) - "The Programming, Design and Management of General Budget Support"
- Guidelines (n°2) - "EC Support to sector programmes: covering the three financing modalities: Sector budget support, Pool funding and EC procurement and EC project procedures" - 2007
- Guidelines (n°3) - "Making technical cooperation more effective" - 2009
- Guidelines (n°4) – "Guidelines on the Integration of Environment and Climate Change in Development Cooperation" - 2009

Reference documents

- Reference document (n°1) - "Institutional Assessment and Capacity Development – Why, what and how?" - 2005
- Reference document (n°2) - "Supporting decentralisation and local governance in third countries" - 2008
- Reference document (n°3) - "Strengthening project internal monitoring: How to enhance the role of EC task managers" - 2009
- Reference document (n°4) - "Analysing and Addressing Governance in Sector Operations" - 2009
- Reference document (n°5) - "Sector Approaches in Agriculture and Rural Development" - 2009
- Reference document (n°6) - "Toolkit for Capacity Development" – 2009
- Reference document (n°7) - "Water Sector Development and Governance: Complementarities and synergies between Sector-wide Approach and Integrated Water Resource Management" – 2009
- Reference document (n°8) - "Engaging and Supporting Parliaments Worldwide -Strategies and methodologies for EC action in support to parliaments" – 2010
- Reference document (n°9) - "Support for judicial reform in ACP Countries" – 2010
- Reference document (n°10) - "Trade and Private Sector Policy and Development – Support programmes financed by EU external assistance" – 2010
- Reference document (n°11) - "Emerging good practice on Codes of Conduct, Partnership Principles and Memorandums of Understanding in the Water Sector" – 2010
- Reference document (n°12) – "Engaging Non-State Actors in New Aid Modalities - For better development outcomes and governance" – 2011
- Reference document (n°13) – "Addressing undernutrition in external assistance – An integrated approach through sectors and aid modalities " - 2011

Concept papers

- Concept paper (n°1) - "Public Sector Reform: An Introduction" - 2009

KQ-31-10-700-EN-C

Publications Office

ISBN 978-92-79-16974-8