

Enhancing EC's contribution to address child and maternal undernutrition and its causes

Background paper for the seminar



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The present document is a background paper prepared for the EC seminar “Enhancing EC’s contribution to address child and maternal undernutrition and its causes”, held in Brussels from 7 to 8 May 2008.

The aim of this paper was to stimulate discussion and debate and it should not be considered as an official document.

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I. Introduction

The European Commission is in the process of reviewing its involvement in the field of nutrition in developing countries. This initiative was first triggered by the desire to maximise the impact of EC resources on food security and nutrition and better support progress towards the first MDG target: halving, between 1990 and 2015, the proportion of people who suffer from hunger.

Secondly, it was prompted by the awareness that “structural” malnutrition, and namely chronic malnutrition, have largely been overlooked and does not frequently feature among development priorities.

Thirdly, there is a need to better articulate responses to malnutrition during emergencies and post-crisis actions and hence strengthen the LRRD (Linking Relief Rehabilitation and Development) within the European Commission in order to properly tackle malnutrition.

The seminar — “Enhancing EC's contribution to address maternal and child undernutrition and its causes” — is part of the process which will enable Europe Aid to prioritise its support to effective strategies and actions to combat malnutrition.

The objectives of the seminar are twofold:

- ▶ to review the main types of strategies and actions in the field of nutrition and the relevance of these, assisted by nutrition experts and in light of recently published findings¹;
- ▶ to provide inputs to prepare a reference document on the new EC approach, strategy, position and responses to tackle undernutrition and, in particular, better address chronic malnutrition.

The scope of the seminar is restricted to one form of malnutrition: undernutrition. The two days allocated to the exercise do not allow sufficient time to cover obesity and over-consumption². The focus on mothers and children reflects the scale of the issue among these groups and its consequences on mortality, morbidity and development.

This paper is intended to highlight key challenges and raise issues for discussion at the meeting. It provides a brief overview of levels and consequences of undernutrition, and goes on to discuss national and international systems which aim to address undernutrition. A glossary with key terms and definitions is provided in annex 2.

¹ *Lancet Series - Maternal and Child Undernutrition, 2008 referred to in this document as the “Lancet Series 08”.*

² *The obesity epidemic and diet-related chronic non-communicable diseases are spreading quickly and are major public health/nutrition issues. They should be included at a later stage of the revision process.*

II. Undernutrition³

Latest estimates report that there are 13 million children born annually with Intrauterine Growth Restriction, 178 million children under 5 years stunted and 55 million wasted⁴.

Between 40 and 50% of pregnant women and preschool children suffer from iron deficiency anaemia worldwide⁵. About 40% of children are growing up with insufficient vitamin A⁶. About 15% of people in developing countries lack adequate iodine⁷.

According to UNICEF⁸, the prevalence of underweight amongst children less than five years has declined in developing countries from 32% to 27% between 1990 and 2006. This reduction is considerably lower than what is needed in order to reach the MDG 1 indicator of halving, between 1990 and 2015, the proportion of children under five who are underweight.

●● Regions most affected by undernutrition and trends

Undernutrition amongst children under 5 years is often primarily seen as an “African” problem. Data from the Lancet Series challenge somewhat this assumption.

The highest numbers of children undernourished are recorded in South Central Asia for both stunting (74 million) and wasting (29 million) indicators. South Central Asia exhibits also the highest prevalence of wasting (16%). The highest prevalence estimates for stunting are recorded in Middle and Eastern Africa: 50% and 42% respectively. South Central Asia is also afflicted by particularly high maternal undernutrition. Zinc deficiency is high in most of sub-Saharan Africa, in South Asia and in parts of South and Central America.

80% of the world's stunted children live in 20 countries and 90% in 36 countries (see annex 3).

One must also consider past trends and future projections to ascertain the scale of the problem and compare between regions. **In Sub-Saharan Africa**, although the prevalence of underweight appears to have dropped (32% in 1990 to 28% in 2006)⁹, **the number of underweight children is on the increase**. It rose from 29 million to 37 million between 1990 and 2003¹⁰. Between 2005 and 2015, an additional 3.7 million¹¹ underweight children is expected. In South Asia, both the prevalence (54% in 1990 to 46% in 2006¹²) and the number (88 million in 1990 and an estimated 64 million in 2005¹³) are declining.

→ Implications, challenges and priorities

- What are the implications of the above in terms of geographical priorities/focus?

³ “Undernutrition includes a wide array of effects including: intrauterine growth restriction resulting in low birthweight; underweight, a reflection of low weight-for-age; stunting, a chronic restriction of growth in height indicated by a low height-for-age; wasting, an acute weight loss indicated by a low weight-for-height; and less visible micronutrient deficiencies.” *Lancet Series summary, 08.*

⁴ *Lancet Series, 2008, data from 2005.*

⁵ *Ibid.*

⁶ “Vitamin and mineral deficiency. A global progress report”, UNICEF, *The Micronutrient Initiative, 2004.*

⁷ *Ibid.*

⁸ “Progress for Children. A World Fit for Children. Statistical Review”, no. 6, UNICEF, December 2007.

⁹ *Ibid.*

¹⁰ “The Millenium Development Goal Report”, UN, 2005.

¹¹ “Everybody's business, nobody's responsibility”, SC UK, 2007 - Data available for 40 countries.

¹² *Ibid.*

¹³ *The obesity epidemic and diet-related chronic non-communicable diseases are spreading quickly and are major public health/nutrition issues. They should be included at a later stage of the revision process.*

●● Undernutrition: the result of a complex interplay of factors

Undernutrition encompasses several conditions (e.g. stunting, wasting, anaemia, etc.) and each of these can have different and/or common determinants. In addition, each one of these conditions is usually the result of a combination of factors.

The framework presented in annex 4 is a simplified representation of the types and levels of causes leading to undernutrition. It distinguishes between causes operating at three levels: immediate, underlying and basic causes.

The immediate causes relate to the individual level and they are grouped in two types: child dietary intake and health status.

Beyond this, underlying causes operate at household and community levels. They are clustered into three categories: household food security, care for children/women and health environment/health services, with income poverty underpinning all three. A recent World Bank publication¹⁴ reviewing data from 50 developing countries called attention again to the economic dimension and inequities at stake in undernutrition. For instance, the prevalence of

stunting increases with poverty and severe stunting (all 50 countries combined) is almost three times higher amongst the poorest wealth quintile (18.0%) compared to the richest wealth quintile (6.2%).

The third level i.e. basic causes, regroup a wide array of causes operating at sub-national, national and supra-national levels. These range from natural resources, social, political and economic environment.

The various determinants of undernutrition act in synergy with one level of causes influencing the others. Given the complex interplay of factors at stake, it is believed that a **multi-sectoral approach** is required to act on the multiple determinants and prevent/address undernutrition in the long-term.

→ Implications, challenges and priorities

- What is required for an integrated and multi-disciplinary approach to address the multiple and intricate causes of malnutrition?



●● Impact of undernutrition and the “crucial window of opportunity”

Child and maternal undernutrition exacts a terrible toll on developing countries and as well as a consequence of poverty, it is also a cause. It is estimated to be responsible for **3.5 million deaths per year**¹⁵, 35% of the disease burden amongst children under 5 years and 11% of total global Disability Adjusted Life

¹⁴ “Socio-economic differences in health, nutrition, and population within developing countries. An overview”, Gwatkin R.D. et al., World Bank, 2007.

¹⁵ Thus, the reduction of undernutrition is also important to achieve MDG 4: reduce child mortality.

Years¹⁶. The **highest risk factors** for children under 5 in terms of deaths and DALYs come from **severe wasting, stunting and intrauterine growth restriction. Vitamin A and zinc** deficiencies come second as underlying causes of the disease burden. Iron and iodine deficiencies appear to carry a small disease burden for children but they impair cognitive development. Moreover, iron deficiency is responsible for at least 20% of maternal mortality.

Poor foetal growth and child stunting can have a profound and irreversible impact if it is not addressed in the first two years of life. It can reduce physical and mental capacity which in turn impact on health status, economic potential, well-being and can perpetuate poverty. Moreover, undernutrition passes from one generation to the next as maternal undernutrition increases the risk of intrauterine growth restriction, low birthweight leading to the perpetuation of the malnutrition inter-generational cycle. It is therefore critical to ensure the right conditions are there 6 months before and during the pregnancy and the first two years of

life of a child (the crucial window of opportunity) in order to reduce undernutrition and avert its adverse effects.

→ **Implications, challenges and priorities**

- What are the implications of the “window of opportunity”?

III. National level systems to address undernutrition and its causes

●● Nutrition information and systems: some of the issues

There are diverse sources of nutrition information. The most common ones are presented in annex 5. This section does not aim to provide an exhaustive review of the strengths and

¹⁶ DALY: an indicator developed for the calculation of disease burden which quantifies, in a single indicator, time lost due to premature death with time lived with disability.



weaknesses of nutrition information or the successes and failures of information systems pertaining to nutrition. Its objective is to highlight key challenges specific to nutrition information and issues that recurrently plague the information base for decision making.

The two broad topics which appeared to be of particular relevance for this seminar are: the (in)adequacy of information for decision making and challenges associated with the systems' structures.

Inadequacy of the information for decision making

The **inadequacy of the information for decision making** stems from several problems.

Poor quality data, analysis and interpretation are often reported. There is often a lack of capacity to perform these tasks. Interpretation of nutrition indicators is also frequently hampered by a lack of contextual information. In addition, the information base could be greatly enhanced by a **stronger analysis of the causes of malnutrition and their relative importance**¹⁷. It should help to place greater emphasis on addressing causes and prevention of undernutrition. Moreover, in the absence of such an analysis, it is difficult to determine strategic priorities, subsequent actions, and allocate resources accordingly in order to prevent and address undernutrition.

A **lack of harmonisation of methodologies** weakens the ability to compare and prioritise geographical areas. In some cases, this is further compounded by an **uneven geographical coverage** of surveys and information systems.

Even in the case of quality data, **the relevance of the information for decision making** is sometimes questionable. The choice of indicator is crucial to get the right information for the right purpose. For example, the weight-for-age index — a composite measure of stunting and wasting — tends to inform poorly on both acute and chronic malnutrition.

The **level of data desegregation** does not always allow for local level decision making.

Measuring the impact¹⁸ of programmes, policies or strategies on nutrition outcomes needs to be strengthened in many areas in order to build up the evidence base, determine and prioritise effective actions while re-orienting those which prove to be ineffective.

In addition to the above, information for **early warning faces specific challenges: timeliness of the information**, adequate use of the weight-for-height index which is a rather "late indicator" and requires **regular/seasonal monitoring** to be informative. And last but not least, various sources of information sometimes provide **conflicting messages** which hinders decision making.

Weaknesses of information systems: coordination and sustainability

The latter point brings us to issues with the systems and firstly, the question of coordination. Coordination between different information providers, systems, various initiatives and decision makers is a real challenge. Of particular interest for this seminar is the issue of national-level coordination of various initiatives supported by different international bodies resulting in conflicting initiatives or duplication of efforts. International actors tend to pursue their own objectives/agenda and follow their own methodologies whereas harmonisation would require more compromise. For example, sentinel sites might be set up at the same time as observatories using a partially different set of indicators and different sample frames. It is difficult to reconcile these two initiatives without upsetting powerful agencies. Even support to co-

¹⁷ It is important to acknowledge that gathering meaningful "statistical" information on the various causes and their relative importance is complex and costly. Nevertheless, causal analysis could often be strengthened through using the causal framework as a diagnosis and planning tool and interpreting together a broader range of information (e.g. health, food security data) and knowledge.

¹⁸ Measuring the impact of an action on undernutrition (including attributing a change to that specific action) is often complex. It is especially a challenge for actions which aim to address underlying or basic causes.

ordination mechanisms can lead to duplication of coordination structures in some instances.

Secondly, **sustainability** (referring mainly to **funding sources**) is a recurrent issue for these systems. Nutrition information comprehensive and disaggregated enough to support operations is costly. It is recognised by most that long term investments are required but changes in political or aid priorities do not always allow for this. Inclusion of information systems in the state budget should ensure their long-term viability. However, several examples have proven that it can also lead to poor quality information and a collapse of the system.

→ Implications and challenges

- What type of support should the EC provide to strengthen the quality of the information base for decision making?
- What should be in place to ensure that the right level of causal analysis is made available to decision makers?
- How to improve institutionalisation and sustainability of information systems?
- What should happen to ensure coordination of different initiatives and systems and avoid duplications?
- What should be prioritised by the EC?

●● A conducive policy/strategy environment for nutrition?

Although some countries already had a nutrition policy, the International Conference on Nutrition in 1992 created a momentum for countries to develop comprehensive nutrition policies, strategies and/or action plans. The intention was to create an enabling environment for a multi-sectoral approach and bring together the various actors/ministries to prevent

and address malnutrition. The national nutrition action plans were meant to overcome the lack of or inadequate priority given to malnutrition at policy/national plan level.

The policies or action plans have not achieved, by and large, the expected results. The two key reasons repeatedly put forward are the **lack of resources** and inadequate **political commitment**. It might also be that the proposed **actions were inadequate (low quality information) or insufficient**. In addition, the non-sectoral nature of nutrition calls for a complex institutional arrangement which may be difficult to situate and manage within government and non-government structures. This point is further discussed in the paragraph 3.3.

In the worst affected countries, these nutrition action plans /policies often suffer from a lack of vision and sometimes include questionable priorities (unclear or unrealistic). They often remain disproportionately under-ambitious for the scale of the problem and over-ambitious in light of allocated resources. Deciding where to invest a meagre budget hoping to have an impact on malnutrition remains a challenge. Under such circumstances, many countries have prioritised the much needed reduction of some micronutrient deficiencies. For example, the reduction of vitamin A deficiencies through the health system was prioritised — with success — in light of constraints. Other priorities related to long term prevention would require sustained commitment and investments, a broader group of stakeholders and might not yield rapid results.

Many of these action plans/policies are narrowly focused on three main themes: education/sensitisation, reduction of micronutrient deficiencies (iodine, vitamin A and iron) and treatment of severe acute malnutrition. This is partly explained by the fact that other strategies or action plans are meant to cover the other dimensions at stake in malnutrition. However, this is seldom the case. Even when the prevalence of severe acute malnutrition is high, nutrition is not necessarily a public health priority in national health plans. Among other policies/strategies relevant to nutrition such as rural development strategies for example, nutrition objectives do not ap-

pear clearly or remain of little ambition. Indirect actions are expected to yield positive results for nutrition without it being a clear objective. **A paradox arises when nutrition indicators are used to measure impact while the reduction of undernutrition is not an objective.**

Amongst strategies commonly found in developing countries, **PRSPs can offer the necessary multi-sectoral framework to tackle undernutrition.** A World Bank review¹⁹ concludes that out of 40 PRSPs, a majority “includes strategies and specific actions to mitigate the effects of malnutrition”. However, “the strategies and actions included in PRSPs often do not reflect an appropriate response to the nature of the nutrition problem in the country. In a quarter of countries with macronutrient deficiencies and about 40% of countries with micronutrient deficiencies, the PRSPs fail to address these two problems.” Nevertheless, PRSPs offer a unique opportunity to tackle undernutrition and the latter offers a good indicator of poverty (stunting) to measure progress of PRSPs.

¹⁹ “Mainstreaming nutrition into poverty reduction strategy papers: what does it take? A review of the early experience”, Shekar M. et al., World Bank, 2006.



●● Institutional arrangements and the challenge of a multi-sectoral approach

The many sectors and bodies involved in tackling undernutrition **require complex institutional arrangements and strong coordination mechanisms.** As nutrition does not automatically fall under a single line ministry, there are several models. Nutrition often falls under the remit of health ministries or under a specific nutrition body/committee or under a vice president or prime minister's office.

It is important to note that food security faces similar difficulties to establish well-functioning institutional set ups which can have knock-on effects on its integration into the nutrition sphere.

A key challenge comes from the fact that the body in charge of nutrition at central level is not necessarily in the same line of management as programme implementers/budget holders. Responsibilities and decision making are not always clear. In the end, financial resources can strongly influence where decision making

→ Implications and challenges

- Nutrition policies, strategies or action plans have rarely achieved their objectives. What type of engagement and priorities could be considered by the EC at this level? How could it contribute to increase relevance, usefulness, broader focus and ensure they are put into action?
- What are the options to bring together strategies, policies relevant to nutrition? Do we need isolated and narrow nutrition strategies?
- Should nutrition be integrated into PRSPs for example? If so, how can it be better achieved?

lies. For example a well funded crisis prevention and management system can have more decision making power over a certain type of malnutrition than an under-resourced and undervalued nutrition unit within a ministry of health.

→ Implications and challenges

- What are the options to give undernutrition a higher priority and mainstream it into development strategies/policies? Should “nutrition champions” in key places be considered and supported?
- On what principles should the EC engage to support and promote appropriate institutional arrangements and coordination mechanisms suited to a multi-sectoral approach?



●● Actions to address undernutrition: the dilemma of where to invest

Decisions about what actions should be prioritised to address undernutrition are made difficult by the complex and inter-related causes at stake. Decision makers are faced with two broad dilemmas to allocate resources:

- What sectors should be prioritised? Health? Water? Economic sector? Or all ?
- What level of causation (immediate, underlying or basic causes) should the action target?²⁰ For example, should there be more emphasis on advocacy to change economic and trade policies? Should more resources be allocated to micronutrient supplementation?

It is important to note that choosing to invest in one sector or at one level rather than another might result in losing a synergy which is essential to a long term reduction of undernutrition.

The above questions are often difficult to answer because of a lack of understanding of:

- The causes of undernutrition and their relative importance in a given context.
- What works, what will be most cost-effective and what will have a long lasting effect.

As discussed earlier, adequate information is of paramount importance to determine the right packages of actions suited to the problems, the lack of which may lead to implemen-

²⁰ This issue also presents itself as a slightly different question: how much emphasis should be placed on prevention versus treatment of undernutrition? Moreover, preventive measures can be sub-divided into investment in short term prevention (e.g. a blanket food distribution prior to a food gap) versus long term prevention (e.g. support to veterinary services to strengthen households' assets base, income/food security and subsequently increase their ability to provide for their children). The “prevention versus treatment” and “long term versus short term” debates lie also at the heart of the emergency — development divide.

tation of actions which are ineffective. Rather than describe what is typically being done, this section deliberately focuses on what works and what needs to happen to **ensure the adoption of effective actions to tackle undernutrition**.

The first part of the section focuses on actions typically found in "nutrition programmes" (e.g. nutrition education, micronutrient interventions). The second part discusses actions which can equally have an impact on undernutrition but are often not seen as part of comprehensive package of nutrition interventions and are too rarely designed with a specific nutrition objective.

Actions typically/often found in "nutrition intervention packages"

The Lancet Series 08 offer an answer to the "what works" question specifically for a set of actions traditionally included in nutrition programmes²¹. These aim to address mostly the upper part of the nutrition causal model.

Among these "traditional" nutrition interventions, those with demonstrated impact on maternal and child undernutrition are presented in annex 6.

"Of the reviewed interventions, breastfeeding promotion, appropriate complementary feeding, supplementation with vitamin A and zinc, and appropriate management of severe acute malnutrition showed the most promise for reducing child deaths and future disease burden related to undernutrition." Lancet Series 08

According to the authors, these **actions have to be implemented at scale and need to effectively reach those in need** in order to tackle undernutrition. They estimate that "universal coverage with the full package of proven interventions at observed levels of programme effectiveness 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, averting some 60 million DALYs" in the 36 worst affected countries.

They also stress the fact that **ineffective actions should be dropped** to avoid waste of resources.

Although the seminar will not focus on crisis contexts specifically, improving the "emergency-development" link is a priority for the EC. As part of this, the treatment of acute malnutrition presents a particular challenge and provides an example where the implementation of LRRD can make a difference. In emergency settings, TFP, SFP and CMAM²² aim to treat acute malnutrition amongst children under five (as a priority). The treatment has greatly evolved in past years with the development of community-based approaches and new products (RUTF). From a public nutrition point of view, key challenges remain: reducing the cost of these programmes²³, achieving greater coverage to meaningfully contribute to the reduction of acute malnutrition prevalence and strengthening the capacity of national health systems to treat malnutrition. Several initiatives are underway to attempt to address the above²⁴.

Once the crisis is over or when emergency funding runs out, the most common exit strategy for these programmes consists in attempting to "integrate" the service into the health system.

²¹ *Promotion of breastfeeding, strategies to promote complementary feeding (with or without provision of food supplements), micronutrient interventions, general supportive strategies to improve family and community nutrition, and reduction of disease burden (promotion of hand-washing and strategies to reduce the burden of malaria in pregnancy). The potential impact of these interventions was considered in the 36 countries with 90% of stunted children worldwide.*

²² Formerly called CTC.

²³ *According to MSF, the cost of RUTF alone was about 30 Euros/malnourished child in 2006 in Niger while the national health budget was 5 Euros/person/year ("Nutrition Niger - Une campagne pour lutter contre la malnutrition aigüe, maladie négligée", octobre 2006, N°3, MSF). In total, the treatment cost about 85 Euros/child (Rapport annuel d'activité 2006 et perspectives 2007, MSF Niger).*

²⁴ *One example is the work of Valid International among others, which is considering ways of reducing costs and easing integration of treatment of acute malnutrition into health systems. The latter is also the focus of a FANTA/USAID initiative. Another example is the work led by ENN and SC UK which is looking at coverage and impact of SFPs and alternative actions to reduce the prevalence of acute malnutrition.*

It often fails as “integration” can be perceived by the health service as being “pushed” on them and they often do not have the required financial resources. What could be the role of LRRD in such a case?

Moreover, it is the opinion of some EC employees, that more could be done under the LRRD initiative to smoothen the transition emergency - development in general.

Other actions less frequently designed to address undernutrition

In addition to the interventions traditionally included in “nutrition packages”, there are others which focus on basic and underlying causes such as lack of capital, policy environment, income poverty, household access to health care and household food security. Addressing these determinants is essential to prevent and ensure long term reduction of undernutrition. As mentioned above, even if a universal coverage of the full package of effective interventions reviewed by the Lancet Series 08 was achieved, it would not be sufficient as it would only potentially reduce the prevalence of stunting at 36 months by about one-third in the 36 worst affected countries.

Some examples of actions at these levels are land reforms, safety-nets/social transfers, food assistance, livestock restocking, primary health care, women empowerment, education, agriculture and water programmes. Actions aimed at addressing lack of capital, economic policies, income poverty and food insecurity are of particular interest to this seminar for three main reasons²⁵. Reducing economic determinants is of paramount importance to tackle undernutrition. Historically, the EC has substantially invested in food security and rural development amongst other areas. Rising world food prices is adding another unprecedented challenge for household economies, food security and nutrition.

The impact on nutrition of these “indirect” actions is generally less well understood/documented. There are several reasons for this. First, such interventions are not necessarily designed with a nutrition objective in mind and hence

are not evaluated by this criterion. It is also difficult to ascertain their impact on undernutrition when they are used as preventative measures and/or when a complex causal pathway is involved. For example, an employment creation scheme can lead to a rise in household purchasing power and an improved diet for the child while at the same time the employment opportunity may result in increased workload for the mothers caring for young children, resulting in poorer quality of care.

The further down the intervention is (in the causal model) from undernutrition, the broader its impact might be (i.e. affecting several causes at the level above). However, the further down the intervention the lesser likelihood there is of the “trickle up” effect all the way to undernutrition. Therefore, having an impact on undernutrition is more uncertain. For example, an increase in cattle holding can result in higher income, better diet and an improvement in the child's nutrition status. It can also be that the increase in cattle holding results in higher income spent on primary/secondary education with little impact on the nutritional status of a child under two years.

The “indirect” interventions' are rarely incorporated in a comprehensive package to address undernutrition. When they are implemented as part of a livelihood / food security programme for example, they are not necessarily designed in a way that would maximise their impact on undernutrition. For instance, irrigation schemes have had mixed nutrition outcomes as the benefits of improved access to food and cash income can be outweighed by greater exposure to water-borne diseases and increased workload for women²⁶. There is a substantial knowledge base on the link nutrition - agriculture that one can draw from when planning agricultural

²⁵ *Considering the health, water and education dimensions are of equal importance. However, it was not possible to do justice to all of these in this paper.*

²⁶ *“Les grands hydro-aménagements au Burkina Faso contribuent-ils à l'amélioration des situations nutritionnelles des enfants?”, Parent G. et al., Cahiers d'études et de recherches francophones / Agricultures. Volume 11, Numéro 1, 51-7, Janvier-février 2002.*

programmes. These and other livelihoods/food security interventions should be more systematically aligned behind nutrition objectives and designed to improve nutritional outcomes.

→ **Implications, priorities and challenges**

- How to ensure that actions are based on an understanding of the situation/problems (information - action link)?
- How to prioritise actions in the current “nutrition intervention packages” that address the most common and recurrent problems and have proven to be effective?
- What would it take to ensure these actions operate at scale and effectively reach those in need?
- On what basis should sectors (or group of sectors) be prioritised according to various contexts?
- What is needed to decide with confidence the level of causes that actions should target?
- What needs to happen to re-orient ineffective actions?
- What is necessary to assess the impact of standard actions targeted at basic and underlying causes (and their possible negative impact) according to contexts?
- Based on the above and on situation analysis, what are the next steps to increase/re-structure the set of actions designed to address the underlying and basic causes of undernutrition according to the contexts?
- How could the LRRD ensure a smoother shift from emergency nutrition (with high ECHO investment) to post-crisis situations?



IV. International nutrition community

●● Shortcomings of the international community

There is a number of different types of actors committed to tackling undernutrition (see annex 7). However, despite the large number of actors in the international nutrition community, **the remit of nutrition tends to be narrowly defined, and confined to three dimensions: reduction of micronutrient deficiencies, improvement of infants and young children feeding practices and treatment of acute malnutrition.** Despite a couple of noticeable exceptions²⁷, the private sector and civil society are also poorly integrated in this community.

The very nature of undernutrition calls for a broader set of actions/priorities and therefore greater involvement — as an integral part of

²⁷ The mandate of GAIN (Global Alliance for Improving Nutrition) is to forge an alliance of public, private, and civil society partners committed to eliminating micronutrient deficiencies globally.

the nutrition community — of other areas such as health, food security and poverty alleviation. It also requires more diverse profiles of actors and their greater integration within the nutrition community. This is essential to sustainably bring down global prevalence of undernutrition.

Involving a broader set of actors adds a further challenge to an already difficult coordination of various actors and initiatives, including those aimed at building a concerted effort.

As in the case of national level systems, complex institutional arrangements are required for nutrition within international actors. In the case of the EC, DG ECHO has a clear mandate for nutrition in emergencies. It is less clear which body takes over this leadership and brings together the different sectors in development contexts.

The Lancet Series 08 found that the international nutrition system is “dysfunctional” and have identified shortcomings such as “fragmentation, lack of evidence base for prioritised action²⁸, institutional inertia”.

“The authors argue that the international nutrition system should deliver in four functional areas to directly support national actors in high-burdened countries:

- stewardship²⁹,
- mobilisation of financial resources,
- direct provision of nutrition services when national groups are unable or unwilling to do so, and
- human and institutional resource strengthening.

Mobilisation of financial resources is particularly relevant to this seminar.

●● Major donor funding and EC positioning

As shown in annex 8, the USA was, between 2000 and 2004, by far the largest donor for basic nutrition, development food aid or food security assistance and emergency food aid. The EC ranks second for the latter two and is

The article on the Lancet Series 08

“Maternal and Child Undernutrition: an urgent opportunity”, ends with the following statement:

“This latest Lancet Series concludes, not surprisingly perhaps, that the international nutrition system is broken. Leadership is absent, resources are too few, capacity is fragile, and emergency response systems are fragmentary. New governance arrangements are urgently needed. An agency, donor, or political leader needs to step up to this challenge. There is a fabulous opportunity right now for someone to do so. But who?”

amongst the lowest contributors for basic nutrition.³⁰

Another analysis estimated the investments made by governments and the EC to tackle stunting (see annex 9)³¹. The EC ranks nearly last on direct³² investments and first on indirect³³ ones. There is no guarantee though, that the latter have an impact on stunting and if they do, it is rarely measured. Nevertheless, it might be that one of the comparative advantages of the EC vis a vis other donors lies at this level.

²⁸ Weak evaluations.

²⁹ “Fostering good management of resources with the idea of promoting effective actions (evidence based), provide more coordinated support and guidance to national bodies, applying the basics of good practice to their own programmes such as rigorous impact evaluations”.

³⁰ Lancet Series 2008.

³¹ Source : Sumner A. et al., “Greater DFID and EC Leadership on Chronic Malnutrition: Opportunities and Constraints”, Institute of Development Studies, 2007.

³² E.g. breastfeeding counselling, targeted food aid, micronutrient supplementation.

³³ E.g. support to agriculture, food security, health system, education, governance.



The Lancet Series 08 estimated that total funding for basic nutrition interventions per annum from 2000 to 2005 amounted to US\$250-300 million (see annex 10). Over the same period funding for food aid/food security amounted to US\$1.375billion while US\$5.7billion were allocated to HIV/AIDS per annum. According to the Lancet, there are no more DALYS lost to HIV than to maternal and child undernutrition. This suggests both an overall under-funding of nutrition, and questionable prioritisation of available resources.

There is a general agreement that although substantial investments have been made to tackle malnutrition, it is wholly insufficient to reach the MDG 1 target. Nutrition has been used to provide indicators of impact in various programmes, poverty reduction and progress towards the MDG. It is also time to align more resources behind nutrition objectives for the indicator to actually measure an impact and show an improvement where there is no or insufficient progress towards the MDG 1 target and in high burdened countries. ●

→ Implications and challenges

- What could be recommended in terms of institutional arrangements/ leadership for nutrition in development contexts within the EC?
- What steps need to be taken to involve a broader set of actors in the fight against malnutrition?
- How should the EC support the international system? What are the priorities?
- How should the EC position itself within the current donor environment?
- What should be done to maximise the impact of funding for “indirect actions” on undernutrition?
- What are the recommendations for the EC in the short term (with the current financial instruments)?
- What are the recommendations for the long term?

Annexes

Annex 1 — Acronyms and abbreviations

ADB	African Development Bank
ADB	Asian Development Bank
AED	Academy for Educational Development
AKF	Aga Khan Foundation
BMI	Body Mass Index
BRAC	Bangladesh Rural Advancement Committee
CDC	Centers for Disease Control and prevention
CGIAR	Consultative Group on International Agricultural Research
CIDA	Canadian International Development Agency
CILSS	Comité Permanent Inter-Etats de Lutte contre la Sécheresse dans le Sahel
CMAM	Community-based Management of Acute Malnutrition
CTC	Community Therapeutic Care
DALY	Disability Adjusted Life years
DANIDA	Danish International Development Agency
DfID	Department for International Development (UK)
DG ECHO	Directorate General European Commission Humanitarian Office
DHS	Demographic and Health Survey
EC	European Commission
ECHUI	Ending Child Hunger and Undernutrition Initiative
ENN	Emergency Nutrition Network
EU	European Union
EWS	Early Warning Systems
FANTA	Food and Nutrition Technical Assistance Project
FAO	Food and Agriculture Organisation
GAIN	Global Alliance for Improving Nutrition
GTZ	German Agency for Technical Assistance
HKI	Hellen Keller International
IADB	Inter American Development Bank
ICDDR	International Centre for Disease Research, Bangladesh

IDD	Iodine Deficiency Disorders
IDS	Institute of Development Studies
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
IRD	Institut de Recherche pour le Développement
IUGR	Intrauterine Growth Restriction
JICA	Japanese International Cooperation Agency
LRRD	Linking Relief Rehabilitation and Development
MDG	Millennium Development Goal
MI	Micronutrient Initiative
MICS	Multiple Indicators Cluster Survey
MSF	Médecins Sans Frontières
MUAC	Mid-Upper Arm Circumference
NEDA	Netherlands Development Assistance
NGO	Non Governmental Organisation
NORAD	Norwegian Agency for Development Cooperation
ODA	Overseas Development Assistance
PRSPs	Poverty Reduction Strategy Papers
RUTF	Ready to Use Therapeutic Food
TFP	Therapeutic Feeding Programme
SCF	Save the Children (formerly called Save the Children Fund)
SIDA	Swedish International Development Agency
SCN	Standing Committee on Nutrition
SC UK	Save the Children UK
SFP	Supplementary Feeding Programme
UNICEF	United Nations Children's Fund
UNU	United Nations University
USAID	United States Agency for International Development
WABA	World Alliance for Breastfeeding Action
WB	World Bank
WFP	World Food Programme
WHO	World Health Organisation

Annex 2 — Glossary

Acute malnutrition

Low weight-for-height (see wasting below) and/or bilateral oedema

Anaemia

Low level of haemoglobin in the blood (< 11g/dl of blood for children under five years), as evidenced by a reduced quality or quantity of red blood cells.

Causes are several, iron deficiency accounts for about half of anaemia cases.

Anthropometry

Use of human body measurements to obtain information about nutritional status

Body Mass Index (BMI)

Body weight in kilograms divided by height in meters squared (kg/m²). This is mostly used as an index of "fatness" amongst adults. Both high BMI (overweight, BMI greater than 25) and low BMI (thinness, BMI less than 18.5) are considered inadequate.

Chronic malnutrition

See stunting

Disability Adjusted Life Year (DALY)

An indicator developed for the calculation of disease burden which quantifies, in a single indicator, time lost due to premature death with time lived with disability.

Iodine Deficiency Disorders (IDDs)

All of the ill effects of iodine deficiency in a population that can be prevented by ensuring that the population has an adequate intake of

iodine. The spectrum of IDD includes goitre, hypothyroidism, impaired mental function, stillbirths, abortions, congenital anomalies and neurological cretinism.

Low birthweight (LBW)

Defined as a body weight at birth of less than 2500 grams

Micronutrients

Vitamins and minerals

MUAC

Mid-Upper-Arm Circumference is used by some as an indicator of acute malnutrition (mostly in emergencies). It is a predictor of risk of death when below 110 mm in children aged 12 (or 6) - 59 months.

Stunting

Low height-for-age. It refers to shortness that is a deficit of linear growth which has failed to reach genetic potential as a result of poor diet and disease. Stunting is defined as a height-for-age index < - 2 Z-scores of the median of the international reference population. Severe stunting is defined as a height-for-age index < - 3 Z-scores below the median of the international reference population.

Underweight

Low weight-for-age and a composite of stunting and wasting. Underweight is defined as a weight-for-age index < - 2 Z-scores of the median of the international reference population. Severe underweight is defined as a weight-for-age index < - 3 Z-scores below the median of the international reference population.

Wasting

Low weight-for-height. It is usually the result of a severe process (lack of food and/or disease) that has produced a substantial weight loss. Wasting is defined as a weight-for-height index

< - 2 Z-scores of the median of the international reference population.

Severe wasting is defined as a weight-for-height index < - 3 Z-scores below the median of the international reference population.

●● WHO guidelines for assessing the severity of malnutrition

Indicator	Severity of malnutrition by prevalence ranges (%)			
	Low	Medium	High	Very High
Stunting	< 20	20-29	30-39	> 40
Underweight	< 10	10-19	20-29	> 30
Wasting	< 5	5-9	10-14	>15

Source: WHO, 2000

Annex 3 — The 36 countries with childhood stunting prevalence > 20% covering 90% of the 78 million globally estimated number of stunted children

Country ³⁴	% stunted ³⁵	Numbers < 5 years stunted in millions
India	51.0	61,206
Indonesia	45.3	9,772
Nigeria	43.0	9,571
Bangladesh	50.5	8,787
Pakistan	41.5	8,763
Ethiopia	57.4	7,498
Democratic Republic of the Congo (the)	44.4	4,977
Philippines (the)	37.8	3,730
Viet Nam	42.4	3,375
Afghanistan	53.6	2,967
United Republic of Tanzania (the)	48.3	2,920
Uganda	44.8	2,675
Sudan (the)	47.6	2,483
Yemen	59.3	2,175
Nepal	57.1	2,078
Kenya	35.8	2,054
Myanmar	40.6	1,891
Egypt	20.3	1,813

cont.

³⁴ The 20 countries with childhood stunting prevalence > 20% covering 80% of the 178 million globally estimated number of stunted children are presented in the grey shaded part of the table.

³⁵ Based on the WHO Child Growth Standards. Data from 2005. For Afghanistan, Cote d'Ivoire, Philippines, South Africa, Turkey and Viet Nam the prevalence of stunting based on WHO Child Growth Standards was derived using a conversion factor.

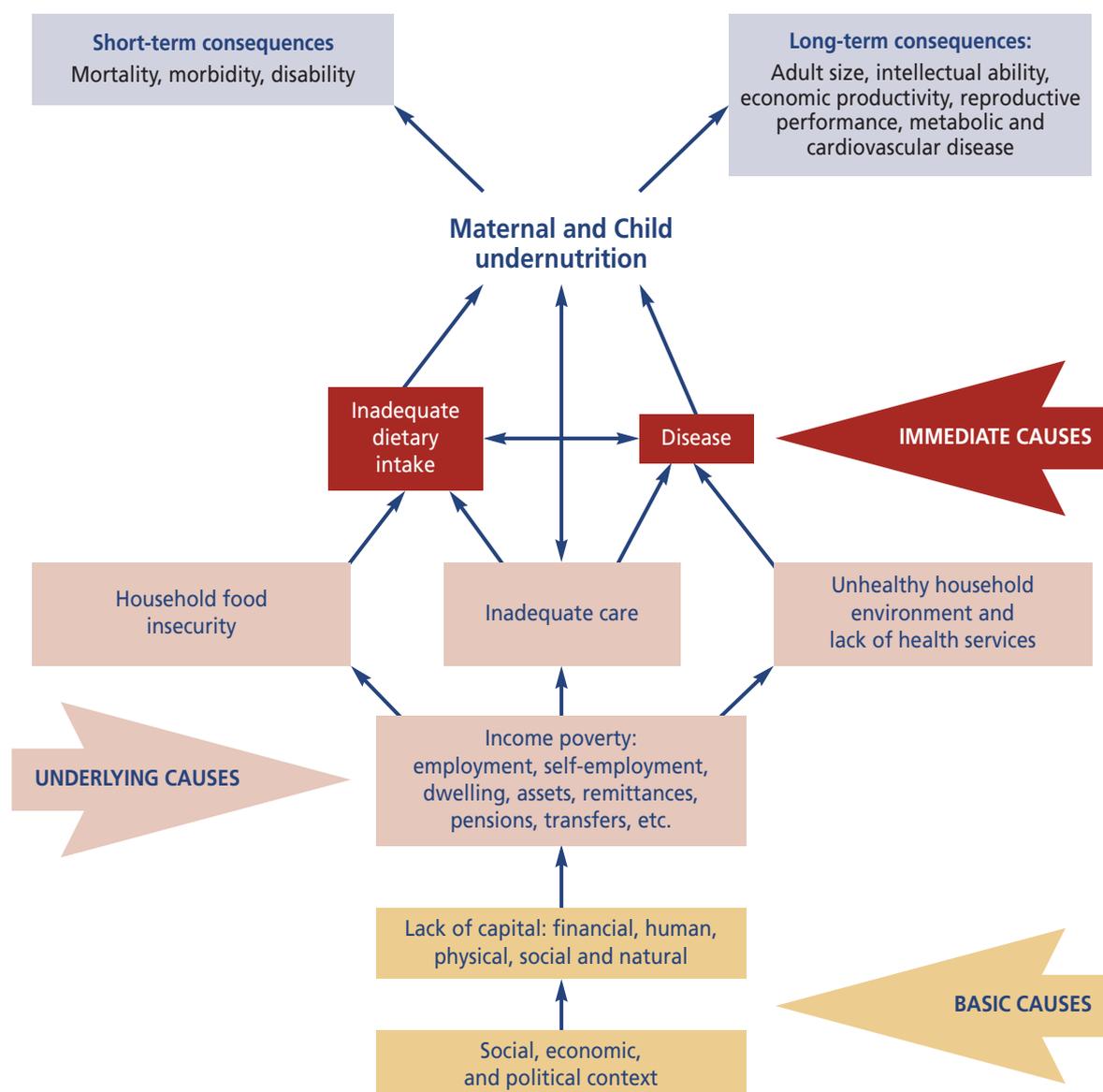
Annex 3 — The 36 countries with childhood stunting prevalence > 20% covering 90% of the 78 million globally estimated number of stunted children

Country	% stunted	Numbers < 5 years stunted in millions
Madagascar	55.5	1,724
South Africa	30.9	1,616
Mozambique	47.0	1,547
Niger (the)	54.2	1,545
Angola	30.8	1,511
Turkey	20.5	1,479
Malawi	54.6	1,278
Iraq	28.3	1,223
Guatemala	59.9	1,210
Mali	42.7	1,111
Ghana	35.6	1,104
Burkina Faso	43.1	1,060
Zambia	52.5	1,056
Peru	31.3	938
Cambodia	49.1	901
Cameroon	35.4	868
Côte d'Ivoire	31.1	863
Burundi	63.1	837

Source: Lancet Series 2008

Annex 4 — Framework of the relations between poverty, food insecurity, and other underlying and immediate causes to maternal and child undernutrition and its short-term and long-term consequences number of stunted children

Source: *Lancet Series 2008*



Annex 5 — Various types of nutrition information sources

Examples of nutrition information sources are listed below:

- ▶ Localised anthropometric surveys (e.g. often linked to projects such as feeding programmes for children suffering from acute malnutrition).
- ▶ Admission data in child feeding programmes (e.g. TFC, CMAM).
- ▶ Data from Growth Monitoring and Promotion Programmes.
- ▶ Monitoring of nutrition and food indicators through sentinel sites.
- ▶ National surveys such as DHS or the UNICEF-supported MICS.

Some of these sources of information are an integral part of information systems such as:

- ▶ Early Warning Systems and Food Security Information Systems.
- ▶ Health Information Systems.
- ▶ National Nutrition Surveillance Systems/Programmes.

Annex 6 — Interventions with demonstrated impact on maternal and child undernutrition amongst “traditional” nutrition programmes

Source: Lancet Series 2008

Actions with sufficient evidence of effectiveness and feasibility to recommend implementation in all 36 countries³⁶

Actions with evidence of effectiveness and feasibility for implementation in specific situational contexts

MATERNAL AND BIRTH OUTCOMES

Iron folate supplementation
 Maternal supplements of multiple micronutrients
 Maternal iodine through iodisation of salt
 Maternal calcium supplementation
 Interventions to reduce tobacco consumption or indoor air pollution

Maternal supplements of balanced energy and protein
 Maternal iodine supplements
 Maternal deworming in pregnancy
 Intermittent preventive treatment for malaria
 Insecticide-treated bednets

NEWBORN BABIES

Promotion of breastfeeding (individual and group counselling)

Neonatal vitamin A supplementation
 Delayed cord clamping

INFANTS AND CHILDREN

Promotion of breastfeeding (individual and group counselling)
 Behaviour change communication for improved complementary feeding³⁷
 Zinc supplementation
 Zinc in management of diarrhoea
 Vitamin A fortification or supplementation
 Universal salt iodisation
 Handwashing or hygiene interventions
 Treatment of severe acute malnutrition

Conditional cash transfer programmes (with nutritional education)

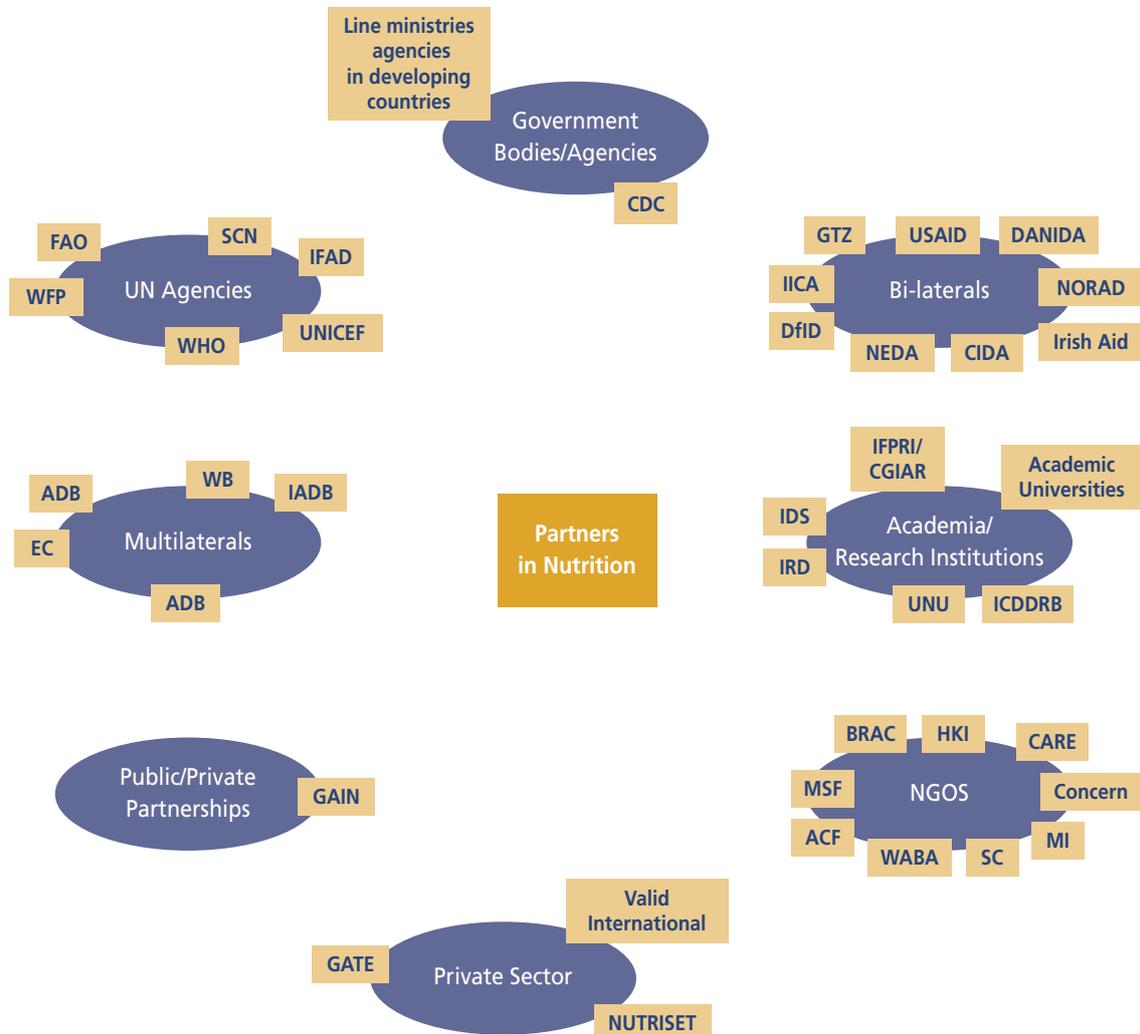
Deworming
 Iron fortification and supplementation programmes
 Insecticide-treated bednets

³⁶ The 36 countries with childhood stunting prevalence > 20% covering 90% of the 178 million globally estimated number of stunted children.

³⁷ Additional food supplements in food-insecure populations.

Annex 7 — Examples of partners supporting nutrition

Adapted from World Bank, 2006



Annex 8 — Aid from developed countries to nutrition and related issues 2000-04

Source: Lancet Series, 08

	Commitments reported to the OECD-DAC						Disbursements to the World Food Programme		Total net overseas development assistance disbursed to 20 priority countries	
	Basic nutrition		Development food aid/food security assistance		Emergency food aid					
	\$millions	% of total	\$millions	% of total	\$millions	% of total	\$millions	% of total	\$millions	% of total
Arab countries	-	-	-	-	-	-	8.2	0.4%	213.1	1.2%
AsDF/AsDB	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	518.2	2.8%
Australia	0.8	0.6%	33.7	2.0%	13.3	1.2%	44.0	2.1%	222.4	1.2%
Belgium	0.4	0.3%	8.7	0.5%	5.9	0.5%	8.0	0.4%	315.0	1.7%
Canada	4.1	3.3%	50.6	2.9%	12.0	1.1%	68.3	3.3%	227.9	1.2%
Denmark	1.6	1.3%	0.1	0.0%	0.0	0.0%	40.8	2.0%	337.0	1.8%
EC	0.5	0.4%	441.3	25.6%	94.9	8.3%	164.7	8.0%	1220.4	6.7%
France	0.0	0.0%	29.8	1.7%	6.8	0.6%	24.3	1.2%	782.6	4.3%
Germany	1.8	1.5%	18.8	1.1%	65.1	5.7%	55.3	2.7%	759.7	4.1%
IDA	23.3	18.8%	17.0	1.0%	1.0	0.1%	0.0	0.0%	3069.5	16.7%
IMF	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	266.2	1.5%
Italy	4.6	3.7%	40.3	2.3%	1.1	0.1%	36.5	1.8%	192.2	1.0%
Japan	3.3	2.7%	48.2	2.8%	0.0	0.0%	141.9	6.9%	2771.5	15.1%
Netherlands	8.1	6.5%	4.1	0.2%	33.2	2.9%	61.9	3.0%	666.9	3.6%
Norway	1.6	1.3%	1.0	0.1%	14.2	1.2%	44.2	2.2%	301.4	1.6%
Spain	2.8	2.3%	8.0	0.5%	4.8	0.4%	6.8	0.3%	92.8	0.5%
Sweden	1.0	0.8%	0.0	0.0%	10.2	0.9%	35.2	1.7%	344.9	1.9%
Switzerland	0.0	0.0%	3.6	0.2%	19.8	1.7%	25.7	1.3%	152.9	0.8%
UNICEF	11.7	9.5%	0.0	0.0%	0.0	0.0%	-	-	180.6	1.0%
UK	4.0	3.2%	39.2	2.3%	58.3	5.1%	87.0	4.2%	1433.9	7.8%
USA	52.8	42.7%	968.1	56.1%	784.7	68.9%	1082.8	52.7%	2870.2	15.7%
TOTAL main donors	122.4		1712.5		1125.3		1935.7		16939.5	
Overall TOTAL	123.8		1725.4		1138.3		2053.7		18328.1	

OECD-DAC = Development Assistance Committee of the Organisation for Economic Cooperation and Development. AsDF = Asian Development Fund. AsDB = Asian Development Bank. EC = European Commission. IDA = International Development Assistance. IMF = International Monetary Fund.

- The contribution of the World Bank (around \$ 120 million/year) and the Gates Foundation (\$ 25 million/year) for the same time period do not show in the table.

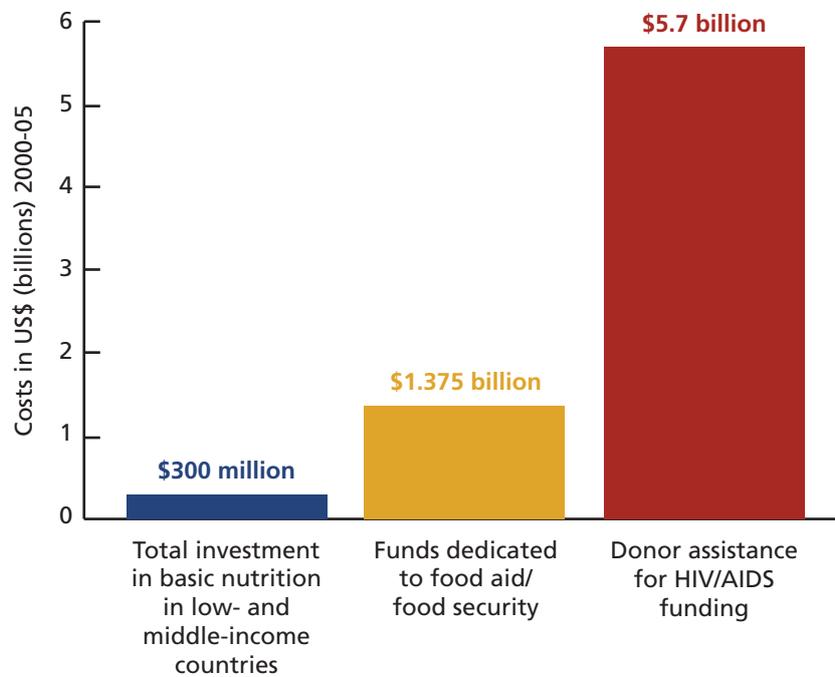
Annex 9 — Bilateral investment in direct and indirect interventions by the top ten donors and the EC to tackle stunting

Source: IDS/Save the Children, 2007

	Spending on direct nutrition interventions 2000-04		Spending on indirect nutrition interventions 2000-04	
	Rank	% of total aid	Rank	% of total aid
Canada	3	0.18	3	6.49
EC	10	0.01	1	13.95
France	11	0	10	2.63
Germany	8	0.02	6	5.25
Italy	4	0.16	9	3.09
Japan	8	0.02	5	5.85
Netherlands	2	0.23	8	3.14
Spain	5	0.14	7	4.31
Sweden	7	0.05	11	2.03
UK	6	0.06	4	6.16
USA	1	0.3	2	8.23

Annex 10 — Comparison of funds dedicated to basic nutrition and food aid/food security versus HIV/AIDS 2000-05

Source: Lancet Series summary, 08



Annex 11 — Key reference documents

Lancet Series on Maternal and Child Undernutrition 2008:

- Black R. E. et al., *Maternal and child undernutrition: global and regional exposures and health consequences*, Lancet Series, 2008.
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