Hungry for Change

An eight-step, costed plan of action to tackle global child hunger

Save the Children
UK

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We're the world's independent children's rights organisation. We're outraged that millions of children are still denied proper healthcare, food, education and protection and we're determined to change this.

Save the Children UK is a member of the International Save the Children Alliance, transforming children's lives in more than 100 countries.

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Cover photo: Ayalech cooks *chumele* – a salty tasting cabbage that grows wild – for her three children in their home in West Badawacha woreda, southern Ethiopia. With no other food available, the family boils and eats *chumele* three times a day. The children do not like it and often get diarrhoea. Most nights they only eat a little and are still hungry. (Photo: Kelley Lynch)

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Executive summary

Child hunger and malnutrition are persistent problems worldwide: one child in three in developing countries is stunted and malnutrition accounts for 35% of children's deaths that occur every year. Children who survive are more vulnerable to infection, don't reach their full height potential and experience impaired cognitive development. This means they do less well in school, earn less as adults and contribute less to the economy. Malnourished women are more likely to give birth to low-birthweight babies. There is a crucial window of time during which malnutrition can be prevented – this stretches from conception to a child's second birthday. If action is not taken during this period the effects of malnutrition are permanent.

Malnutrition in a population reduces gross domestic product (GDP) by an estimated 3–6% and costs billions of dollars in terms of lost productivity and healthcare spending. Malnutrition reduces the impact of investments in all key basic services: it holds back progress in education, in mortality reduction and in treatment of HIV and AIDS. There is a strong case for investments in the area of nutrition, because they deliver results in the short term, have a long-term impact on the economy and help to make investments in other sectors more effective. Despite this, nutrition is typically the concern of a strategically weak part of the ministry of health. It is rarely considered as an investment opportunity for national growth and prosperity.

In many countries, the poorest children experience much more malnutrition than their better-off counterparts. And yet national nutrition plans rarely tackle the socio-economic causes of the problem. There is an assumption that economic growth will solve this problem but, in fact, economic growth often fails to reduce poverty. The economic causes of malnutrition are set to deepen: food prices remain high in many countries and are expected to stay high and fluctuating, the economic downturn is pushing millions more into poverty and climate change is causing an increasing number of extreme climatic events that devastate livelihoods and lead to destitution.

Eighty per cent of the world's stunted children live in just 20 countries. Fourteen of these countries are not on track to achieve the UN's Millennium Development Goal 1 (MDG 1), and nine of them are in Africa. One-third of the world's stunted children live in India. Globally, malnutrition has been very gradually declining (albeit at a pace far too slow to achieve MDG 1), but this trend could be reversed by food price rises and the economic downturn.

In the light of these new global threats and their impact on nutrition, it is time for governments to take a fresh look at their national plans and consider whether these are fit for the purpose of making rapid reductions in malnutrition so as to reach MDGs 1 and 4. The 2008 food price spike put world food security firmly on the international agenda. The political moment has come. In this report we propose, for consideration by governments, a package with eight components designed to improve the diets of pregnant women and children under the age of two, and thereby to help prevent hunger and malnutrition. It is based on what works, and tackles both the immediate and the underlying causes of poor diets. For real progress to be made, cross-ministerial action is required, with strong and high-level leadership.

We estimate the cost of the package to be US$8.8 billion per year for the eight countries where 50% of the world's malnourished children live. The present report focuses on these eight countries. Investments are already being made in measures to tackle the immediate and underlying causes of malnutrition, some of which will be more effective than others. More can be done to strengthen the impact of these investments as well as scaling up investments which we know deliver immediate results. At the same time the momentum created by the food price crisis at global level should be harnessed by international agencies and used to ensure that new investments are made and that nutrition becomes a much higher political priority for all world leaders.

There are six years to go before a final judgement is made on whether or not MDG 1 is reached. We know what to do and it's affordable even in times of scarcity. To do this:

1. Governments of the 36 countries with the highest burden of malnutrition must seize the hunger and child survival agenda, assign top political leaders to oversee it and ensure that a coordinated effort across line ministries is achieved. Malnutrition reduction, on the scale and in the time frame required, will never be achieved if it is seen as solely the job of the ministry of health. Governments in donor countries and in the countries with high rates of malnutrition should support the development of country-specific Declarations of Commitment on the eradication of hunger and malnutrition by 2025.
2. Citizens of the 36 countries with the highest rates of malnutrition must form a much stronger and more effective lobbying force to push for faster, evidence-based action. They should engage in a collective and international civil society campaign to eradicate hunger and malnutrition and to hold governments to account. Donors must fund this work where needed.
3. The World Bank and UN agencies that work on nutrition must agree to coordinate their efforts and maximise the comparative advantages of each institution. The nutrition sector is currently cluttered with multiple initiatives, none of which is succeeding in pushing nutrition up the political agenda. These initiatives need to add up to greater impact rather than detract from one another. At individual country level, international agencies must align themselves behind a single government plan.
4. Malnutrition reduction must be a priority for the International Health Partnership, future partnerships on agriculture, food security and nutrition, and for any new funds for enhancing safety nets and social protection. These initiatives and funds must translate into effective, coordinated action at country level, and the numbers of underweight children, particularly among the poor, should be a key measure of progress.
5. National and international systems for monitoring the food security and nutrition situation must be improved. We need to know how the diets and nutritional status of young children are being affected by global events in time for action to be taken quickly, rather than years after a crisis has occurred.
6. The private sector must play a crucial role in supporting the development of nutrient-rich products that treat and prevent malnutrition, and work with public sector agencies to ensure these are accessible to the poorest women and children. They must also make sure that the promotion of their products avoids contributing to low breastfeeding rates or to the double burden of malnutrition and obesity.
7. Bilateral and multilateral donors must prioritise and scale up funding to the countries with the highest burden of malnutrition and prioritise actions that focus on the critical 33-month period, which is from conception to a child's second birthday. They must work together to ensure that nutrition becomes an international political priority. They should ensure that no credible government plan to reduce malnutrition fails through lack of funds. They should also invest in mechanisms to further expand the evidence base on strategies to tackle stunting.

Introduction

In May 1919 a young woman named Eglantyne Jebb was arrested in London's Trafalgar Square. A few days later at her trial, she was found guilty of distributing "Fight the Famine" leaflets in which she highlighted the plight of starving Austrian children. She was only fined five pounds, which she declared to her mother "is equivalent to victory!" After the trial was over the public prosecution donated a symbolic five pounds towards her cause – and the 'Save the Children Fund' was launched. Many were sceptical about the reports of famine in Europe but Eglantyne Jebb was forceful in her conviction: "It is impossible for us as normal human beings to watch children starve to death without making an effort to save them," she declared.

Ninety years on, 3.1 million children die every year from malnutrition-related causes. The chronic form of malnutrition known as stunting affects 178 million children – one-third of all children under five years old in developing countries. Millions of these children die in their early years, and the remainder grow up with their brains and bodies permanently damaged. In 1990, in agreeing the first Millennium Development Goal (MDG 1), governments promised to reduce by half the proportion of children who were underweight.[1] At that time about a quarter of all children in developing countries were in this category. Very little progress has been made: almost 20 years later, one-fifth of children in these countries remain underweight.

A major cause of malnutrition is a poor diet, referred to as hunger. Illness plays an important part and clearly investments are needed in health, clean water and sanitation to reduce the risk of infection and to ensure that treatment is available. However, young children get infections in their early years all over the world, but those with a good diet lose less weight when they get sick and then recover any illness-induced weight loss. Those with a poor diet do not. Some babies are born malnourished because their mothers were malnourished in childhood or had very poor diets during pregnancy. Improving the diets of women and children will go a long way towards preventing this persistent problem.

While the problem is huge and potentially growing, the solutions have become clearer. The critical period when the irrevocable damage is done is from conception through to the child's second birthday. If this 33-month period of a child's life can be protected, huge progress could be made. Similarly, 90% of all stunted children live in 36 countries, 80% live in 20 countries and half live in just eight countries. If tackling the malnutrition problem was a top political priority for these countries' governments and their development partners, a major part of the problem would be solved. The scientific evidence has been published in *The Lancet* in the form of a menu of proven interventions. Social protection, including the regular provision of cash transfers, which perhaps hold the strongest promise for improving the diets of pregnant women and young children, is finally being considered by some governments as a basic service alongside those of health and education.

Now there is a clear perception of the problem and it is the right moment to tackle it politically. The 2008 food price spike put world food security firmly on the international agenda. There is now a vibrant policy debate about the best ways to increase agricultural production to feed our growing

population in a context of diminishing oil reserves and of climate change that threatens agricultural land and production. The political aim to achieve world food security is laudable, but it has a hollow ring when there are an estimated 1 billion hungry people in the world today. The effort to ensure that there is enough food for everyone must be extended, to make sure that everyone actually gets it. The 2009 G8 summit promised increased investment in food security, and even acknowledged that this must go beyond agricultural production to include social protection and nutrition.[2] Now is the time to make the malnourished child a political priority and to acknowledge that the elimination of needless child hunger and death is within our grasp.

In Chapter 1 of this report we describe the **malnutrition problem**: those most affected by it and where they live, its consequences and the prospects for nutritional improvement as we approach the 2015 deadline for the MDGs. In this chapter we provide a unique analysis of the impact of current global threats – particularly the global recession, the food crisis and climate change – on the nutritional status of children. In Chapter 2 we present the **package of eight interventions**, which evidence shows are essential for improving the diets of pregnant woman and young children. This package is not exhaustive, but if it is scaled up it could substantially reduce rates of malnutrition. Chapter 3 presents the **cost** of ensuring that these interventions reach children at the critical period of their lives. Chapter 4 focuses on the **politics**: specifically, why malnutrition should be at the top of the political agenda and how this can be achieved, and where there is scope to build on momentum already established. Chapter 5 outlines the immediate **priorities for action**. Throughout, we take a close look at the situation in the eight countries that have half of the world's malnourished children, and where Save the Children is trying to tackle the problem: Afghanistan, Bangladesh, the Democratic Republic of Congo (DRC), Ethiopia, India, Kenya, Sudan and Vietnam.

1 The malnutrition problem

There are three measures of child malnutrition:

- **Chronically malnourished or stunted** children are too short for their age.
- **Acutely malnourished or wasted** children are too thin – their weight is too low for their height.
- An **underweight** child has a low weight for their age and could be chronically and/or acutely malnourished.

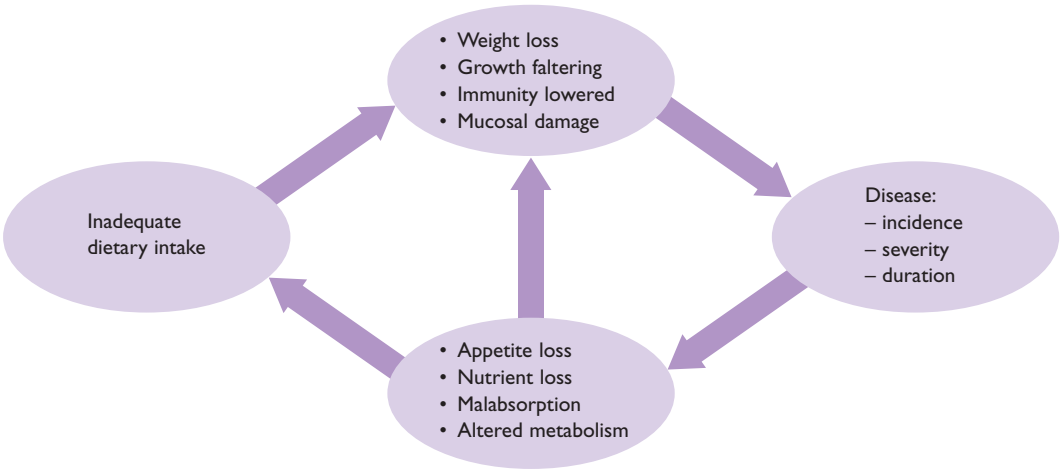
All three types vary in their degree of severity and each is classified as mild, moderate or severe. There is also a hidden aspect of hunger and malnutrition: deficiencies in vitamins and minerals (known as micronutrients) affect billions of people worldwide, with an estimated one-third of children in developing countries deficient in vitamin A alone.

Stunting is a contributory factor in almost 15% of the child deaths that occur each year, as is wasting. Chronic malnutrition is very widespread but less deadly. Wasting is less common but still affects 10% of children under five, and is very dangerous – a child with wasting is nine times more likely to die than a well-nourished child. Vitamin A and zinc deficiency account for 6% and 4% respectively of under-5 deaths, and iron deficiency anaemia in pregnancy accounts for one-fifth of maternal deaths. Micronutrient deficiencies also contribute to stunting.[3]

Increased risk of premature death and growth failure are just some of the consequences of stunting: it also impairs the development of the brain, affecting cognition, motor function and behaviour. A multi-country study has shown that for every 10% increase in the prevalence of stunting, the proportion of children reaching the final grade of school falls by 8%.[4] For the 40 countries where at least 40% of children are stunted, the impact on national education levels is dramatic.

Malnutrition in childhood results from the combined effects of a poor diet and infection (see Figure 1 on page 4). Children are particularly at risk because they need comparatively high levels of nutrients to grow, and their immune systems are immature. In general, when the human body is undernourished it prioritises essential functions, and directs fewer nutrients to growth, repair and immune functions, increasing the risk of infection. Once a child is ill, loss of appetite or loss of essential nutrients through diarrhoeal disease can further affect their nutritional status. Where a child has a severe infection or if his or her diet rapidly deteriorates, the child may suffer sudden weight loss, leading to wasting. If the infection is less severe or the diet deteriorates more slowly, or if a child is born small as a result of poor maternal nutrition, the result may be stunting. Approximately 11% of all children born in developing countries are estimated to have experienced growth failure before they are even born.

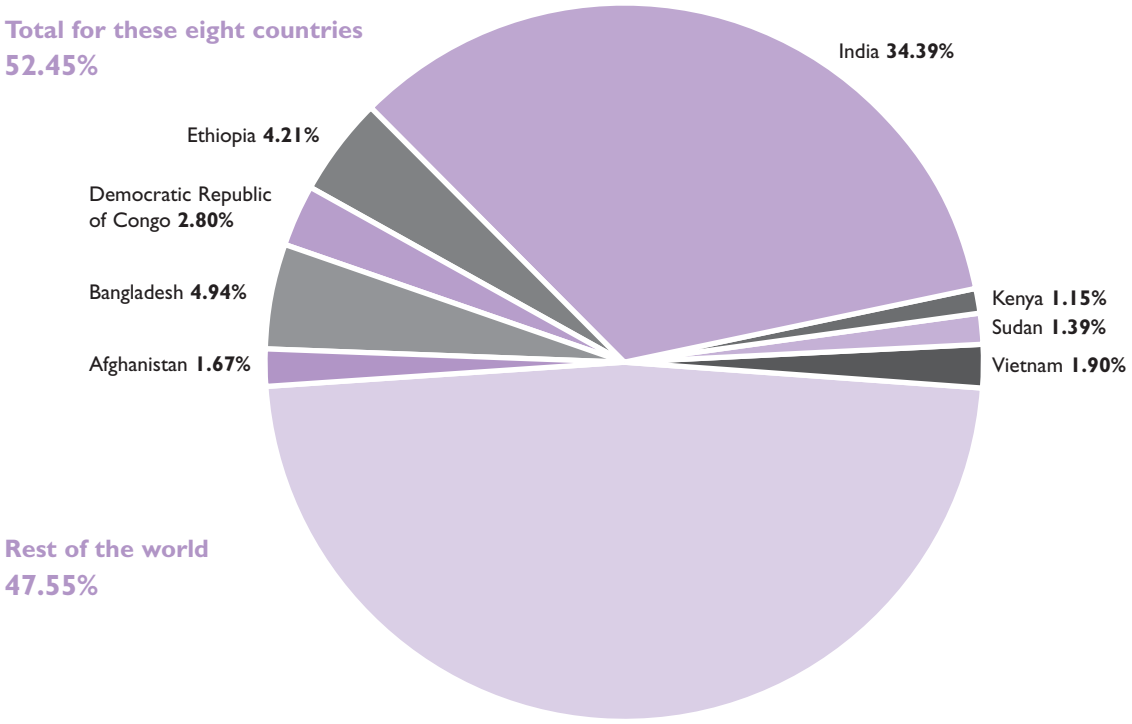
Figure 1: The vicious cycle of inadequate food intake and infection[5]



Where the world's stunted children live

In 2005, there were an estimated 178 million stunted and 55 million wasted children under the age of 5 in developing countries. Nearly two-thirds of stunted children were living in Asia and just under one-third in Africa. Ninety per cent of all the stunted children in the world live in only 36 countries, and 20 of these account for 80% of the total. Even more strikingly, half of the world's stunted children live in just eight countries; it is these countries that are given special focus in this report: Afghanistan, Bangladesh, the Democratic Republic of Congo (DRC), Ethiopia, India, Kenya, Sudan and Vietnam (see Figure 2 below).

Figure 2: Where stunted children live



The national statistics, however, hide an even worse situation for children in the poorest families in these countries. We examined the data for our eight focus countries. In India, Kenya and Vietnam poor children are approximately three times more likely to be underweight than their wealthy counterparts (Table 1).[6,7] For three of the eight countries (Ethiopia, India and Sudan), levels of underweight among poor children today are 15 years behind those of the better-off children. Save the Children's own research tells a similar story. A 2008 study which we conducted in a village in Bangladesh showed that stunting affected 50% of the children in the poorest wealth quartile and only 17% in the richest.

The critical period

Malnutrition primarily occurs during the 33 months stretching from conception to the child's second birthday. This short period is critical because most growth faltering and developmental delays occur during this time (see Figure 1, page 4), and it is still possible to help children under the age of two to catch up because this is the period of greatest plasticity in human development. After two years of age, it is much harder to reverse the effects of chronic malnutrition, particularly the impact on brain development.

Risk during pregnancy

While malnutrition is the result of a deadly interaction between diet and infection, the effects of infection on child growth are transient when the diet is adequate, making the improvement of maternal and child diets a critical part of the solution to malnutrition. The growth of a baby *in utero* is the first point at which the immediate and intergenerational effects of a poor diet are felt. The length of the baby is determined early in pregnancy and can reflect maternal undernutrition both before and after conception. Maternal undernutrition is in turn affected by the size of the mother and her age, as well as her diet. Foetal fat deposition occurs late in pregnancy, so poor maternal nutrition at this stage can lead to a baby being born wasted. Table 2 on page 6 shows the dietary situation in our eight focus countries. It shows that a significant proportion of babies are born with low birthweight (which includes malnutrition *in utero* as well as prematurity). These levels are likely to be underestimates because, globally, 60% of newborns are not delivered in health facilities and therefore not weighed and these are often babies from poorer families.

Table 1: Inequity ratios for underweight indicators for focus countries

Country	Survey year	% underweight by socio economic quintile					Low/High ratio
		Lowest	Second	Middle	Fourth	Highest	
Afghanistan	2004	n/a	n/a	n/a	n/a	n/a	n/a
Bangladesh	2004	54.8	48.4	40.8	39.2	26.8	2.0
DRC	2007	23.5	26.1	24.4	21.6	13	1.8
Ethiopia	2005	38.7	39.4	34.3	31.1	26.1	1.5
India	2005/06	56.6	49.2	41.4	33.6	19.7	2.9
Kenya	2003	26.3	17.8	16.1	15.1	8	3.3
Sudan	2006	31.9	33.4	30.3	23.9	15.9	2.0
Vietnam	2006	25.3	22.2	15.2	13.8	9.1	2.8

Sources: Demographic and Health Surveys (DHS), Myanmar Multiple Indicator Cluster Survey (MICS)2, Sudan Household Survey, Vietnam MICS3

Table 2: Dietary indicators for the eight focus countries[8]

	Under-five mortality rate	% children under five who are stunted	% of babies with low birthweight	% of babies under 6 months who are exclusively breastfed	Adequate diets for children aged 6–24 months[9, 10]		
					% of children fed frequently enough	% of children with a sufficiently diverse diet	% of children eating frequently enough and a sufficiently diverse diet
Afghanistan	257	54	n.a	–	n.a	n.a	n.a
Bangladesh	61	36	22	37	69.5	32.3– 47.1	28.5–40.1
DRC	161	38	12	36	31.9	5.8–14.1	2.5–5.6
Ethiopia	119	47	20	49	57.5	5.2	6.2
India	72	48	28	46	48.8	16.3	12.0
Kenya	121	30	10	13	55.7	36.2– 39.7	24.5–26.7
Sudan	109	43	31	16	n.a	n.a	n.a
Vietnam	15	36	7	17	n.a	n.a	n.a

Notes:

Data on dietary diversity and frequency are based on analysis of existing data from DHS surveys and using breastfeeding data from national, MICS and DHS surveys. It should be noted that for Bangladesh data were missing on specific vitamin A-rich vegetables (other than leafy green vegetables) and on other fruit and vegetables consumed in the previous 24 hours. Thus the figures relating to diet diversity for Bangladesh may be underestimates.

Data on exclusive breastfeeding are likely to be overestimates because of the 24-hour recall methodology used.

Dietary needs of babies and young children

Babies should be breastfed exclusively for their first six months of life to maximise their survival and development. Nevertheless, Table 2 shows that in no country are more than half of children exclusively breastfed. In Kenya and Vietnam the proportion of babies that are exclusively breastfed is only 13% and 17% respectively. This can result in malnutrition occurring extremely early in life. India and Ethiopia have the highest rates of exclusive breastfeeding.

At six months, infants need to be given a diverse range of foods in addition to breast milk to ensure that their needs for essential proteins, fats and micronutrients are met. The rapid growth of young children means that their demands for nutrients are high; they might be small, but weight-for-weight their needs far outweigh those of adults. A one-year-old has between two and four times the energy, fat and protein requirements per kilogram of bodyweight than an average adult. Young children also have small stomachs so they require regular, nutrient-packed meals, given (and stored) hygienically to avoid exposing them to disease. Finally, they need to be fed with care and attention, rather than being left on their own to feed themselves, to make sure that they get maximum benefit from the foods they are given.[11]

Analysis of national survey data shows, however, that in our eight focus countries at least 30% of children aged 6–24 months do not eat frequently enough (a minimum of twice per day for children aged 6–9 months and three times for children aged 9–24 months is recommended if they are still breastfed). The diversity of children's diets is the most shocking of all, however. More than half of children in all countries for which there are data have a daily diet comprising just three food items or fewer: usually the staple food (eg, rice or maize flour), a pulse (possibly peas or lentils) and a vegetable (often green leaves). Given the prevalence of low birthweight and its links to poor maternal nutrition, low levels of exclusive breastfeeding and the poor quality of children's diets, it is not surprising that malnutrition rates are so high in these countries.

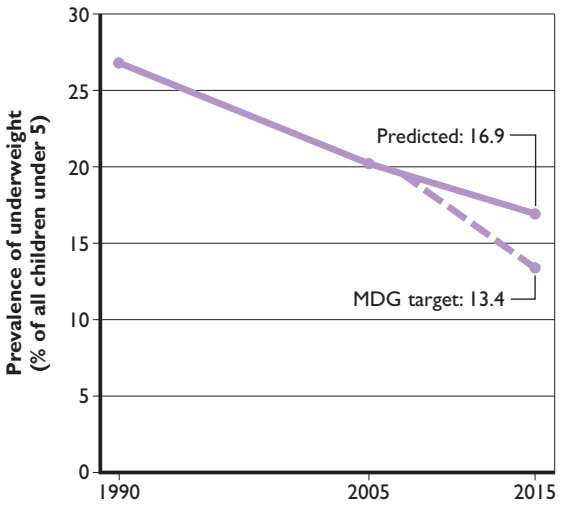
Slow progress towards MDG 1

Progress in reducing malnutrition has been very slow in spite of the first Millennium Development Goal (MDG 1), which aims to halve the proportion of underweight children between 1990 and 2015. Up until 2005, levels of malnutrition globally were declining at an estimated 1.4% per year[12] – only sufficient to achieve a 37% reduction in malnutrition between 1990 and 2015 rather than the targeted 50% reduction (see Figure 3 below).

On the basis of trends up to 2005, we have predicted underweight and stunting rates in 2015 for the 20 countries which in 2005 had 80% of world's stunted children. The results are shown in Table 3 on page 8. The table shows that only six countries are on track to achieve the MDG 1 underweight indicator. The worst performers are DRC, South Africa and Yemen. The best are Egypt and Vietnam. Half the countries will have stunting rates higher than 40% in 2015.

Why has progress been so slow and malnutrition remained so widespread? Comparing reductions in mortality and malnutrition may provide part of the answer. Save the Children's Child Development Index has shown that in 90% of the 137 countries included, mortality reductions have been greater than malnutrition reductions since 1990.[13] This

Figure 3: Proportion of the world's children who are underweight[14]



indicates progress in tackling the most common causes of child death through targeted health service interventions. However, it also highlights the need to take urgent action to ensure that health service investments deliver essential nutrition services to women and children. It also shows the importance of giving priority to investments outside the health sector that will improve poor people's access to food, the status of women and their control over resources, and environmental health.

It is now more important than ever to move beyond a reliance on health service investments to tackle

Table 3: Best and worst performers: the malnutrition situation in 2015 among the 20 countries with 80% of the world's stunted children

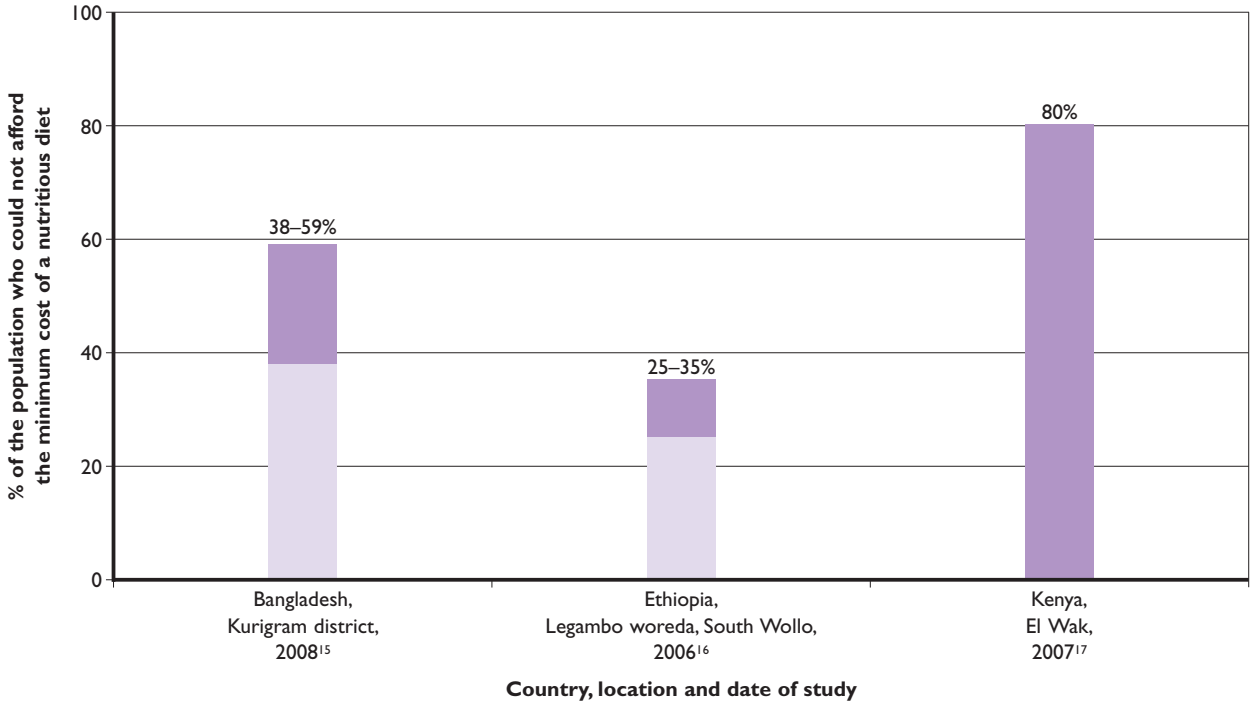
Country	Positive indicators
Egypt	
Vietnam	
Bangladesh	
Myanmar	
Philippines	
Tanzania	
Afghanistan	
Ethiopia	
India	
Indonesia	
Nepal	
Nigeria	
Pakistan	
Kenya	
Madagascar	
Sudan	
Uganda	
DRC	
South Africa	
Yemen	

Key

- On track for MDG 1 (indicator c)
- Number of underweight children in 2015 less than 2005
- Stunting predicted to be less than 40% in 2015
- Number of stunted children in 2015 less than 2005

For more information see methods annex at www.savethechildren.org.uk/hungryforchange

Figure 4: Proportion of population unable to afford a minimum-cost nutritious diet



For more information see methods annex at www.savethechildren.org.uk/hungryforchange

malnutrition, as the economic causes of malnutrition are likely to become increasingly significant as factors contributing towards child mortality. Data presented on page 5 show that malnutrition is concentrated among families who are poor, and that the low quality of diets of children and their mothers is a major contributing factor.

We have investigated the extent to which poverty is a barrier to good nutrition in three countries. This involved comparing family income with the minimum cost of a nutritious diet using Save the Children's 'cost of a diet' method.

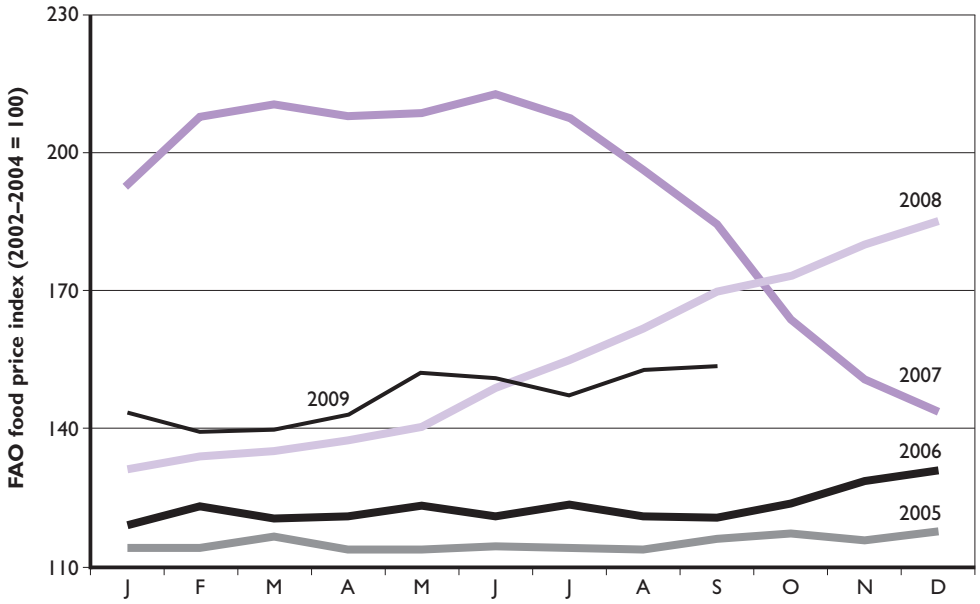
Figure 4, above, shows that a significant proportion of the population could not afford to feed the family members such a diet, even if they spent all their income on food. Only half of households in our Bangladesh study in 2008 had sufficient income to buy the lowest-cost nutritious diet, and many more would have struggled to afford the other essentials of life.[18] Research done in Kenya found that at certain points during the year the foods that provide required levels of key micronutrients were simply not available on the market, regardless of their affordability.[19] The cost of meeting an individual child's nutrient needs is only a small part of a family's total expenditure on food. However, when a family's daily work involves heavy manual labour, and their meals are infrequent, of poor quality and monotonous, it is not always feasible for them to channel all the available nutritious food to pregnant women and children.

The impact of high food prices

High food prices, economic recession and climate change are having a huge impact on poor communities, on top of the underlying economic barriers to good nutrition mentioned above. As a result, the economic causes of malnutrition are now more significant than ever.

From 2005, food prices rose steadily, peaking in 2008 (see Figure 5 on page 10). By 2009 they had returned to levels similar to those in 2007, but they are still expected to remain 35–60% higher than the period 1997–2007 on average.[20] Moreover, in many countries prices have not declined since the 2008 peak. In April 2009, the UN Food and Agriculture Organization (FAO) reported on

Figure 5: Food Price Index from 2005 to 2009



Source: http://www.fao.org/worldfoodsituation/FoodPricesIndex/en/

domestic food prices in 58 developing countries and found that in about 80% of cases, prices were higher than in the previous 12 months, and in around 40% they were higher than in the previous three months. In 17% of the countries, the latest food price quotations were the highest on record.[21] The extent to which changes in international food prices are transmitted to markets in national and community settings depends on a range of factors. These include the degree of a country's dependence on imports, its foreign currency reserves, and the way in which its national food markets function and how they are integrated into international markets. However, the major causes of high food prices remain strong. (These causes include the impact of climatic shocks on production; governments' targets, complemented by financial incentives to use food as a biofuel and dietary transition – eg, increased consumption of meat and dairy in rapidly growing economies.) In addition, fuel prices are already beginning to climb again. There is therefore good reason to believe that food prices will remain high and fluctuating in the coming years.[22]

High food prices hit hardest those who buy their food and spend most of their income on food – the poor living in both rural and urban areas. In the UK, families spend about 9% of their income on food[23] but poor rural families in countries with high levels of malnutrition need to spend at least half and sometimes as much as 80% of their income on food, depending on the season. Very small fluctuations in price can therefore have extreme results. Figure 6 on page 11 shows how much is spent on food and non-food items (school fees, healthcare, fuel for cooking, clothing, etc) by families in Ethiopia, Kenya and the UK.

We conducted research in a village in Bangladesh in 2008 to examine the impact of the food price rises on child nutrition.[24] It showed that the poorest 30–50% of families in our study area had less disposable income than three years previously, while incomes for the better-off had risen. Three years earlier, most people could afford to provide themselves with enough food energy (kilocalories) to meet their needs, but poor families found that a diverse diet was unaffordable, with very damaging consequences for their young children. Now, many poor people can't even afford the kilocalories they need and so are cutting back on the number, as well as the quality, of meals they eat. As explained in Chapter 4, Bangladesh has made good progress in reducing malnutrition. Our study shows that without high prices, stunting among children under

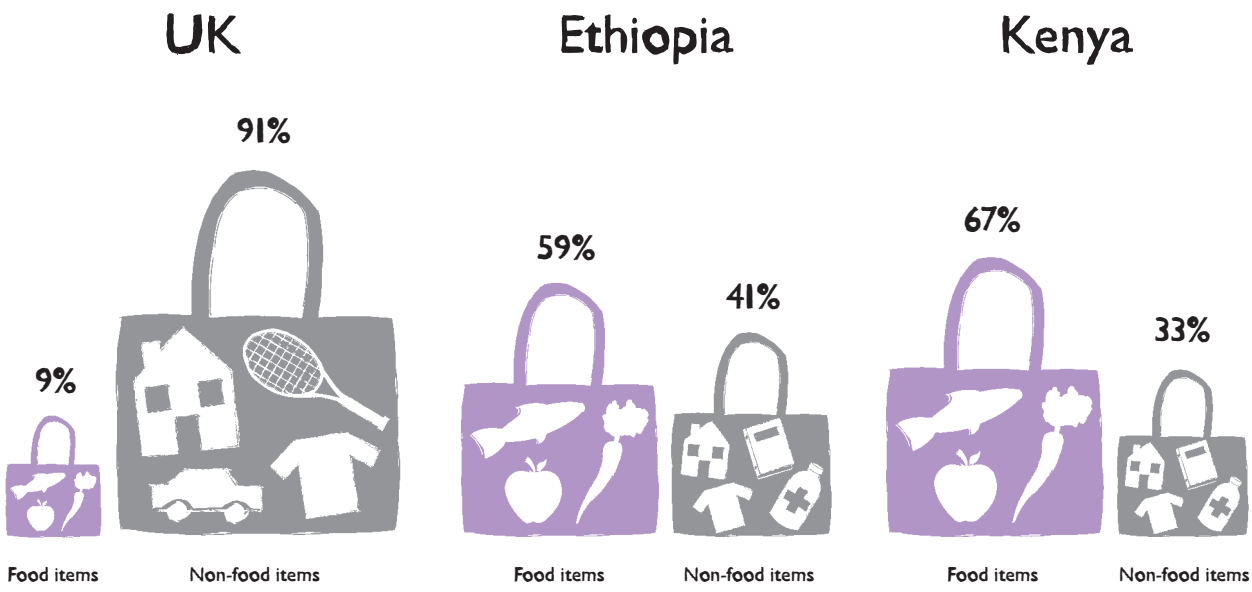
two would have declined by 7% in the last three years in this community. Instead, the incidence of stunting has remained the same. A new generation of very young children has been subjected to the malnutrition rates of three years ago, with potentially irreversible consequences.

Apart from small studies like this, the impact of 2008's extremely high prices is not yet known, largely because national surveys that are relied on to provide these statistics are conducted too infrequently. Based on trends in the number of hungry people and malnourished children[25, 26] and World Bank figures, we estimate that in 2008 alone a minimum of 4.3 million (and potentially as many as 10.4 million) additional children may have become malnourished in developing countries[27] as a result of food price rises.

Economic crisis

After the food price peak of 2008, the world plunged into economic decline. The effects of this on the poor are not yet known but are likely to be devastating. The World Bank estimates that the number of poor people worldwide will increase by approximately 46 million in 2009 alone.[28] The International Monetary Fund (IMF) projects that growth in developing countries' economies will slow down from 6.3% in 2008 to 3.3% in 2009.[29] A combination of weak export demand, falling inward investment, a rise in unemployment, reduced tax revenues, declines in remittances and official development assistance, and very low coverage of social protection programmes, all mean that poverty will increase and governments will find

Figure 6: Household spending in three countries



Notes:

There are huge seasonal variations in daily expenditure in Ethiopia and Kenya, so for this figure we have taken annual expenditure and divided it by 365.

For more information on the Household Economy Approach see the methods annex at www.savethechildren.org.uk/hungryforchange

it even harder to cushion the impact of the crisis on the poor.

Indonesia's dramatic economic crisis of 1997 resulted in women reducing their energy intake in order to protect their children. This led to an increase of 20% in the incidence of maternal wasting. All family members felt the effects of a poorer-quality diet, and for both children and women, levels of iron deficiency anaemia rose significantly. Babies conceived during the crisis period and those up to the age of 18 months were worst hit by the crisis.[30] Evidence also suggests that human development outcomes deteriorate quickly when economic growth slows down yet do not improve at the same pace when growth picks up again. This suggests that the long-term effects of the economic crisis could be profound.[31]

Climate change

In addition to the effects of high food prices and economic decline, poor families face the threats posed by climate change. Already, those living in marginal areas are experiencing these effects. Pastoralists in Ethiopia, for example, are finding that their environment can no longer sustain their herds, so many are forced to settle in towns. One result of this is a decline in the availability of milk for poor children, which has a direct impact on their nutritional status. In the longer term, rises in temperatures caused by global warming are likely to increase agricultural production in middle to high latitudes. By contrast, temperature rises will reduce output in low latitudes, and many developing countries will become even more dependent on food imports and further exposed to the vagaries of international markets.[32] In addition, coastal livelihoods will be destroyed by rises in sea levels, and malaria and water-borne diseases such as diarrhoea are likely to increase with coastal flooding. In areas of water scarcity, the availability of water will decline further, increasing the risk of disease.[33]

Climate change also produces more extreme weather events, which affect the stability of food supply. Farmers with small amounts of land and other assets are the most vulnerable to these shocks. Destruction of livelihoods and resulting population movements can have dramatic and severe impacts on children's nutrition. Normal sources of income are often disrupted, and food stocks may be destroyed. When families are forced to leave their homes, this can disrupt breastfeeding and expose young children to a whole host of deadly infections, leading to high levels of acute malnutrition.

Today 45 million people are estimated to be hungry as a result of climate change,[34] and this total is predicted to rise to between 80 and 210 million during the next few decades.[35] The very worst-case scenario predicts that in 2080 there could be 1.3 billion hungry people in the world, 550 million of whom could be hungry as a result of climate change, and 480 million of whom will be living in Africa.[36]

The triple threat

The impact of this triple threat of food prices, recession and climate change on countries where stunted children live is likely to be profound, exacerbating an already critical situation for poor children. Of the eight focus countries, five have experienced negative terms of trade impacts as a result of recent food price changes (Bangladesh, DRC, Ethiopia, India and Kenya),[37] three have been classified by the IMF as extremely vulnerable to the effects of the financial crisis (DRC, Sudan and Vietnam)[38] and all are facing the growing effects of climate change. In Bangladesh, India and Vietnam rainfall patterns and monsoon timings will affect water resources, sea levels and biodiversity, causing an increase in flash floods, cyclones, typhoons and drought. In Kenya, Ethiopia and Sudan long-term changes in temperature and precipitation will potentially have an adverse effect on food production and livelihoods, and lead to more frequent droughts.[39]

Malnutrition at a glance (2005 statistics)

Stunting – chronic malnutrition affects 178 million children in the world, 32% of all children under the age of five.

Wasting – acute malnutrition affects 55 million children in the world, 10% of all children under the age of five.

Underweight – a combination of wasting and stunting, and the measure most commonly reported by governments, and one of the MDG 1 indicators; it affects 112 million children in the world, 20% of all children under the age of five.

14.5% of deaths of children under 5 are due to stunting.

14.6% of deaths of children under 5 are due to wasting.

6.5% of deaths of children under 5 are due to vitamin A deficiency.

4.4% of deaths of children under 5 are due to zinc deficiency.

11% of all children are born with intra-uterine growth restriction.

Source: R Black et al, 'Maternal and Child Undernutrition: global and regional exposures and health consequences', *The Lancet*, 371: 243–60

2 The child hunger package

Malnutrition results in the unnecessary death of children and also leads to permanent cognitive impairment. It is concentrated among children living in 36 countries, among the poor in those countries, and has its most devastating effects during the 33-month period from conception through to the child's second birthday. Because it has been taking so long to reduce the incidence of malnutrition, it is likely to become an increasingly important cause of child mortality. And poverty is becoming an even more important cause of malnutrition, as the combined effects of high food prices, economic decline and extreme weather events take their toll. Yet the economic barriers to good nutrition have frequently been overlooked in nutrition strategies, as it has been widely assumed that economic growth will make these barriers disappear. In fact, economic growth often fails to reduce poverty. Governments need to take a fresh look at their approaches to reducing malnutrition in the light of the economic factors, so as to be adequately prepared for today's threats to good nutrition.

Here we propose a package of eight interventions that have the potential to dramatically improve the diets of pregnant women and children during the critical 33-month period, and hence to reduce hunger and malnutrition. We also believe the package will equip governments to take appropriate action in the context of the triple threat of high food prices, recession and climate change.

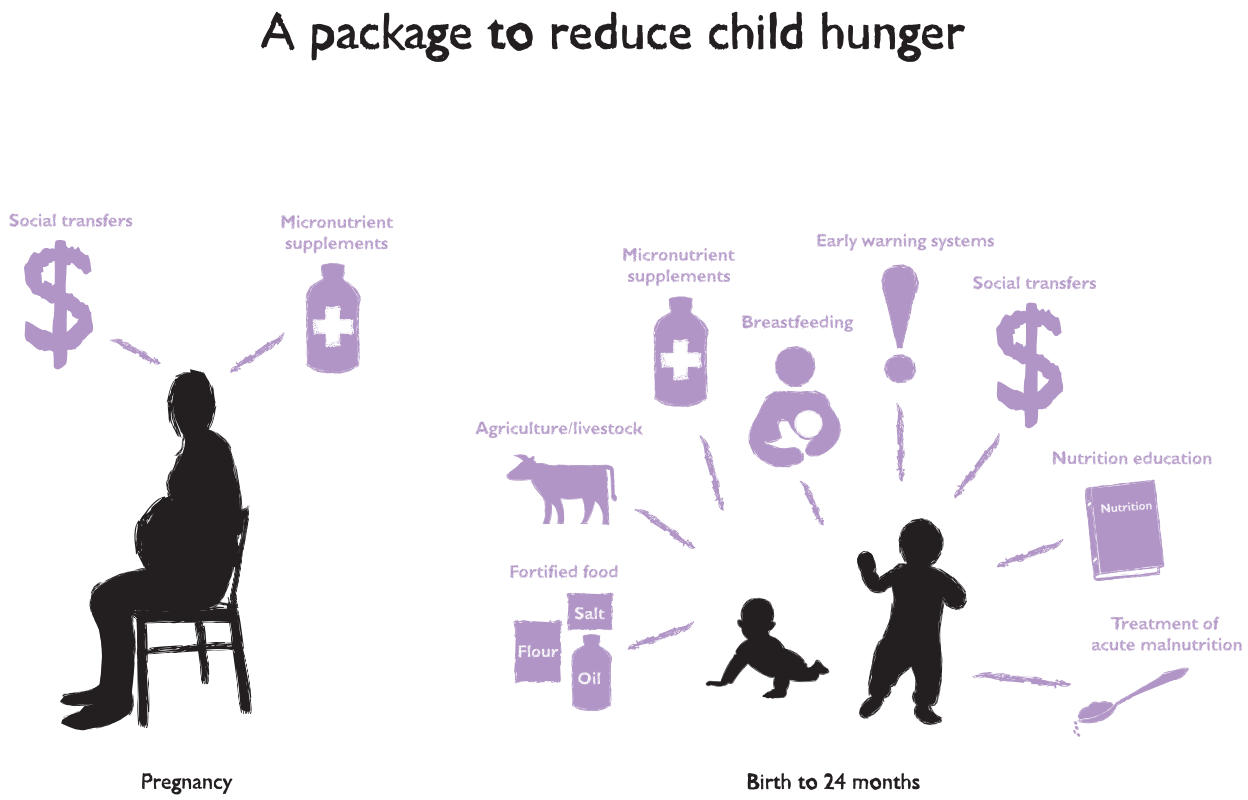
Before going further, however, it's important to consider exactly how improvements in children's diets will be made. Mothers are the people who actually deliver food into the mouths of children. They are often involved in food production or in securing income for purchasing food, and are almost always responsible for preparing food for children and feeding them. In situations of high HIV and AIDS prevalence, children who have lost their mothers may be fed by other caregivers, who in most cases will be female. Therefore, any strategies for improving the nutrition of children must tackle gender discrimination and empower women to carry out this critical work.[40] Failure to do this will undermine the impact and cost-effectiveness of any measures taken.

Before describing the components of the child hunger package, it is important to set it in its wider context.

- First, this package builds on evidence. In 2008 the medical journal *The Lancet* published a comprehensive review of the evidence on interventions to tackle maternal and child undernutrition.[41] It showed that, if implemented fully, interventions could collectively reduce stunting by 36% and mortality by 25%. All the interventions recommended by *The Lancet* that directly affect children's diets and their nutritional status *in utero* are considered here (including micronutrient supplementation, deworming and fortification, breastfeeding support, treatment for severe acute malnutrition, nutrition/hygiene education and conditional cash transfers). The remaining interventions (such as malaria treatment and bed nets) are not considered. These are critical, but in this report we focus specifically on those interventions that are linked to improving diets and reducing hunger.

- Second, we go beyond evidence published in medical journals. *The Lancet* states: "To eliminate stunting in the longer term, these interventions published in *The Lancet* series on Maternal and Child Undernutrition should be supplemented by improvements in the underlying determinants of undernutrition, such as poverty, poor education, disease burden, and lack of women's empowerment." Given that *The Lancet* interventions have the potential to reduce stunting by only one-third, the range of interventions must be expanded. Thus we regard *The Lancet* list as a starting point. In this eight-component package we propose some interventions that address these underlying economic determinants of malnutrition (including cash transfers), and we present the available evidence for them. Our package builds on that proposed by the REACH initiative.[42] This initiative has developed excellent materials for helping governments to deliver some of the interventions described below and should be a key reference point when action is being planned.
- Third, this package is not a blueprint to be blindly applied in all countries. Rather, we believe that it could help to open up a discussion between various line ministries, with a view to strengthening existing national strategies on nutrition. It is also likely to prompt a review of whether the economic barriers to a nutritious diet have been adequately considered in these nutrition strategies. Any nutrition strategy must ultimately be based on the causes of malnutrition in a particular place; and decisions on the balance of investments in the various interventions proposed here should be driven by these specific causes.

Figure 7: The critical 33 months



Package component 1: Breastfeeding support and promotion

Increasing the number of babies who are breastfed optimally could achieve dramatic reductions in child mortality. The evidence of the benefits of breastfeeding has formed the basis for the three breastfeeding goals:

1. All babies should be put to the breast immediately after birth (known as early initiation). That way, the first milk (colostrum) can provide an unequalled boost to the baby's immune system.
2. For the first six months of life, babies should be given only breast milk and no other foods or liquids (including water) – a practice referred to as exclusive breastfeeding.
3. Young children should continue to be breastfed until they are at least two years old.

Even in situations of high HIV prevalence, exclusive breastfeeding up to six months is recommended unless it is acceptable, feasible, affordable, sustainable and safe to use alternatives.[43]

Breastfeeding could reduce mortality in children under five years by at least 12% and possibly as much as 20%.[44, 45, 46, 47] Breastfeeding has its biggest impact on preventing mortality in the first six months of life, but almost one in four deaths attributed to sub-optimal breastfeeding are due to a lack of breastfeeding in children aged 6–24 months.[48] Breastfeeding also makes children healthier and has a significant impact on rates of disease,[49] thereby helping children to grow properly. Because of its enormous health benefits and relatively low cost, support for breastfeeding is one of the most cost-effective public health interventions available today.

The overwhelming majority of women and their babies are physiologically able to breastfeed, although some women may find it difficult to do so. Babies have an innate feeding reflex and breast milk is produced using a simple demand and supply system using hormones as messengers. This system is set up so that the baby dictates the amount and frequency of breast milk produced. Hence, nearly all women in all countries are in theory able to feed their babies in accordance with the three recommendations outlined above. The reasons why women find that they can't or don't breastfeed in accordance with these recommendations are complex, and vary depending on the setting in which the woman is living.

There are, however, a number of actions that can make optimal breastfeeding easier for women. If women receive one-to-one support at critical points before delivery, immediately after delivery and postnatally, rates of breastfeeding improve substantially. The more support they have the better their adherence to recommended practices.[50] The evidence shows that at least seven contacts from the antenatal period up to when the baby is two months old is the ideal.[51] Different countries have tried different approaches, including using midwives, community health workers, lay home-visitors, mothers' support groups and peer counsellors all trained in breastfeeding support, though several studies have shown that peer support can be more cost-effective.[52, 53, 54] The best results are achieved when fathers are also involved in the process. For women delivering in health facilities it is also important that staff in these facilities are well trained in breastfeeding support. Campaigns that promote breastfeeding using multiple media have been shown to be a useful complement to direct support.

As well as providing direct support, governments can take several steps to make the wider environment supportive to breastfeeding. First, there need to be laws based on the International Code of Marketing of Breastmilk Substitutes (adopted by the World Health Assembly in 1981) to prevent the commercial promotion of breastmilk substitutes, bottles and teats. If mothers are being exposed to advertisements or signals from the medical profession that tinned baby milk is as good as breastmilk, then breastfeeding rates won't improve. Legislation must be enforced and monitored. Maternity legislation allowing working women to breastfeed is also important.[55, 56] The International Labour Organization (ILO) recommends 14 weeks of maternity leave with income replacement of at least two-thirds of salary and special concessions

for breastfeeding. Even where many women are employed in the informal sector and may not benefit from maternity protection legislation, national legislation sends a clear message of government standards. Furthermore, health workers may find it difficult to promote exclusive breastfeeding for six months if their own employment conditions prevent them from following their own advice. Finally, Save the Children's experience shows that in an emergency, women are often worried about their ability to breastfeed and therefore need special support and reassurance at a time when their babies need breastmilk most. In addition, unsolicited donations of tinned baby milk by humanitarian agencies can be a real challenge to supporting breastfeeding. For these reasons it is very important that there is a national emergency preparedness plan which sets out what will be done to support breastfeeding in the event of an emergency.

In Ghana, the government put in place a number of these measures, including legislation[57] on the marketing of breastmilk substitutes, mass media campaigns and training for health staff. As a consequence, exclusive breastfeeding rates improved from 7% to 54% over ten years.

Package component 2: Micronutrient supplementation and deworming

Globally, 10% of deaths in children younger than five years are attributable to micronutrient deficiencies, with nearly all this burden due to deficiencies of vitamin A and zinc. While vitamin A supplements have a greater impact on mortality than on stunting, therapeutic zinc supplementation for children with diarrhoea reduces stunting by up to 17% and can reduce mortality from diarrhoea by 50%. When it is combined with oral rehydration salts (ORS), it can prevent as many as three-quarters of all diarrhoea deaths.[58] Anaemia is the most prevalent condition resulting from micronutrient deficiency, affecting an estimated 54% of pregnant women in developing countries. At least half of all anaemia cases in pregnancy are due to nutritional iron-folate deficiency.[59] This raises the risk of pre-term delivery, low birth weight, haemorrhage and sepsis, all of which are associated with increased maternal and infant mortality rates.[60, 61, 62] Iron-folate supplementation can reduce maternal mortality by 23%.[63]

In a number of low-income countries, worm infections contribute to deficiencies in key nutrients by affecting gut absorption and appetite. They also affect the ability of the body to respond to infections.[64] Provision of deworming medication to all children (regardless of whether they definitely have worms) has been shown to improve nutritional status and to reduce anaemia. Similarly, deworming interventions have been found to have a similar effect on pregnant women.[65] To date, deworming interventions have tended to be targeted at preschool (3–5-year-olds) and school-aged children (who have the highest risk of worm infections).[66] Moreover, reducing worm infections among school-aged children can reduce the risk of infection for the whole community. It is important to note, however, that "deworming programmes should not expect immediate improvements in nutritional status and growth unless children consume a diet that is adequate in both quantity and quality".[67] There are relatively few studies that have looked at the impact of deworming on younger children, but it is now recommended that deworming medication be given to all children over the age of one and, in countries where worm infestations are prevalent, pregnant women who are not in their first trimester.[68]

The sustained delivery of both micronutrients and deworming programmes requires a functioning health system and, as with all health services, a trained, paid workforce. Reaching the poorest families can be particularly difficult.[69] Both types of intervention are often most effective when coupled with the provision of other services. For example, National Immunisation Days and Child Health Days can be good moments to ensure the delivery of vitamin A, iron-folate and deworming tablets. Mass media campaigns are important, particularly for zinc and iron-folate. Zinc is not registered for use in all countries and has been prohibitively expensive. Efforts are now under way to transfer the technology for production to local manufacturers to reduce cost; exploring these options is a key priority and registration of zinc for use in each country is essential.[70]

Package component 3: Nutrition-friendly agriculture and livestock policies

While agriculture, agro-pastoralism or pastoralism form the mainstay of the rural economy in all our focus countries, it is perhaps surprising that the poor themselves in these countries draw limited direct benefit from their own agricultural production. Table 4 on page 19 presents the findings from Save the Children's detailed assessments, using the Household Economy Approach in five of the eight focus countries. It shows that in no setting do the poor secure more than 40–50% of their food energy needs from their own production. Similarly, FAO's data from 12 countries show that on average only 31% of households in rural areas were net sellers of food.[71] Instead, the poor purchase most of their food using income gained from working for others (ie, informal labour). The reasons for this are lack of land, lack of access to agricultural inputs (credit, fertilisers, etc) and the absence of opportunities for self-employment. In many of the focus countries the poorest families have no land and therefore no production at all. For those poor families that do have access to small plots of land, it is common for them to have a shortage of cash income at particular times of the year. This forces them to labour on other people's land rather than their own (with knock-on impacts on their own yields), in order to ensure they can still feed their families on a daily basis.

The 2008 food price crisis has made food security a top political priority for governments all over the world. It is triggering policy changes that will lead to a significant increase in investments to boost agricultural production. However, we cannot assume that increasing agricultural production will reduce malnutrition. The growth of agricultural output at national and global levels tells us nothing about whether or not poor people are food-secure and consuming a nutritious diet. In Africa, agricultural production and food imports have been gradually increasing over the past decade, and there is now sufficient food energy available to provide everyone with an average of 2,500 kilocalories per person per day,[72] yet this is the region that has made the least progress in tackling malnutrition. The litmus test for good agricultural investment should be whether or not it helps to lower the percentage of underweight children under five years of age.

Agricultural policies must be designed to increase the availability, and reduce the cost of nutritious food – not simply staple foods or cereals. In Mali, for example, children in villages that practise market gardening or irrigation are less likely to be stunted than those in villages producing only the staple crop (millet).[73] Likewise, in pastoral areas, increasing the availability and quality of more nutritious foods, including meat and milk, is known to be closely linked to children's improved nutrition.[74] Agricultural policies must be adopted that are designed specifically to increase the incomes of the poorest sections of society and take into account the difficulties they face in accessing land, inputs and labour. A wide range of strategies will be needed to deal with the securing of land rights, crop diversification, effective regulation of informal labour markets, improved access to markets and, where necessary, economic support for agricultural inputs. Policies must take specific account of the fact that the majority of small-scale farmers are women, who are balancing childcare responsibilities and farming. Agricultural policies that take women away from their children for long periods may be detrimental to improvements in nutrition in the population.

Table 4: Proportion of food needs covered by families' own production in five countries*

	Ethiopia	Bangladesh	Kenya	DRC	Sudan
Location and date of Household Economy Approach assessment	North Shoa Highland Sheep and Barley Zone, 2006	Kurigram Mainland Zone, Bangladesh, 2000	Wajir South Grassland Zone, Kenya, 2007	Massina Commune (urban), Kinshasa, DRC, 2000	Southern Sudan, Western Flood Plains Zone, 1998–2002
Livelihood pattern	Highland zone with livestock (sheep) and agricultural production	Agricultural zone focused on rice production with significant landless population	Semi-arid area dominated by pastoral activities with some petty trade	Urban area dominated by casual labour	Agro-pastoral activities with seasonal flooding
% of the population categorised as 'very poor' or 'poor'	47.5%	42%	55%	35%	34%
% of food derived from own agricultural production categorised as 'very poor' or 'poor'	44–51%	42%	0%	1%	19%
% food derived from own livestock production categorised as 'very poor' or 'poor'	2%	0%	2–5%	0%	2%

* Data drawn from Save the Children's Household Economy Approach assessments

For more information on methods see the annex at www.savethechildren.org.uk/hungryforchange

Package component 4: Safety nets and social cash transfers

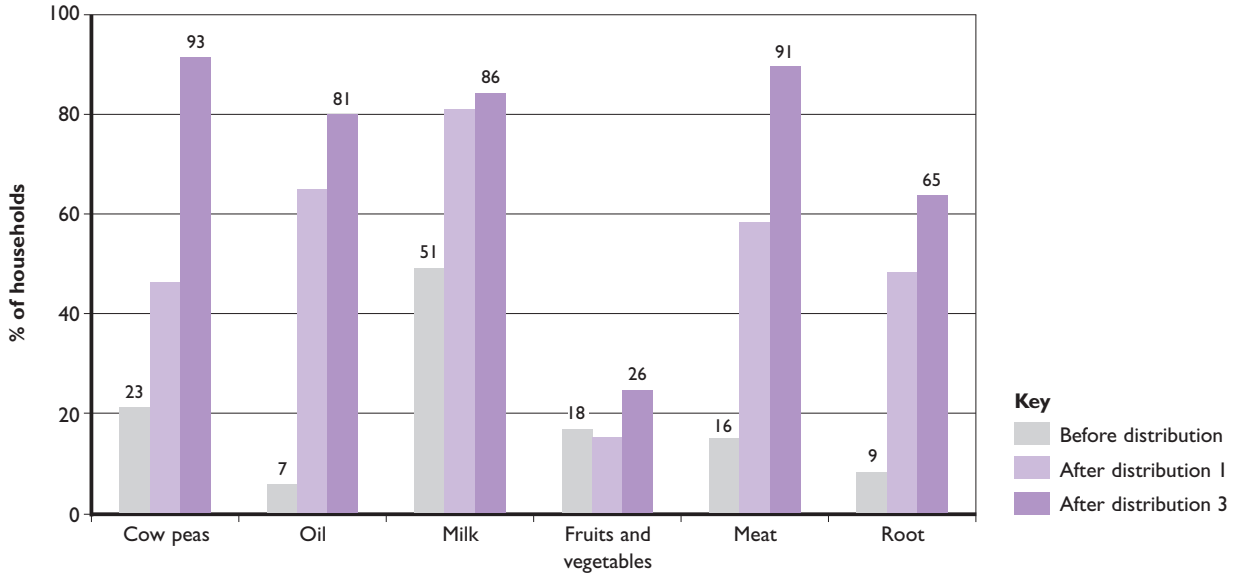
While investments in agricultural production can improve the availability of nutritious foods, safety nets and social cash transfers are very important for helping poor families to afford a nutritious diet for their children. Social cash transfers should aim to reach children early, prioritising children under the age of five and pregnant women in the form of child and maternity benefit. Out of ten cash transfer programmes that report on stunting, seven show positive and sizeable impacts.[75, 76, 77, 78] These are mostly conditional cash transfer programmes in Latin America, though they also include unconditional programmes in Malawi[79] and South Africa.[80] Only one study (in Colombia) has looked at the impact of social cash transfers on birthweight, and it showed average increases of 578 and 176 grams respectively in urban and rural areas of the programme.[81] There is also evidence that food transfers given to pregnant women can reduce intra-uterine growth retardation by 32%[82] and that impacts are greatest when supplementation begins early in pregnancy.[83, 84]

Complementing the published evidence, Save the Children's own research shows important impacts of unconditional cash transfers and safety nets on children's diets.

- Evidence of increased dietary diversity in young children can be seen in Swaziland, where we responded to a drought in 2007/08 with a six-month cash transfer programme. Each of the 6,500 households received a cash payment equivalent to the market value of 50% of a food aid ration, and they also received a 50% in-kind food aid ration. The evaluation demonstrated a notable improvement in dietary diversity for households receiving cash and food, from 33% of children when the project began to over 80% of children six months later. This was 22% higher than for households receiving food aid alone.[85]
- In 2008 in Niger, Save the Children implemented an emergency cash safety net programme for the lean season for the poorest one-third of the population in Maradi region. It had an immediate impact on families' expenditure on higher-quality foods (see Figure 8).[86]

The evidence suggests that transfers are most effective in reducing malnutrition when they reach children early in life. Targeting can sometimes be difficult and there are real risks that the very poor get excluded. The use of age criteria rather than socio-economic criteria to determine eligibility for a transfer can overcome this problem. It can also reduce the administrative costs, as means testing can be expensive to conduct on a large scale.

Figure 8: Impact of lean-season cash transfer on household expenditure on quality foods



Child benefits for all children under the age of two and maternity benefits for all pregnant women during their last two trimesters would ensure that resources reached families at critical points for the promotion of good nutrition.[87]

Given the critical role that women play in the nutrition of children, transfers should be delivered where possible in a manner that increases their control over family resources. Some evidence suggests this greatly enhances the impact of the transfer on child nutrition.[88] This supports other evidence from south Asia that women's control over assets is a strong determinant of good nutrition. Conditions imposed on receipt of transfers (such as attendance at health facilities) should be avoided in low-income countries where the supply of services is often weak, and in the absence of evidence proving the beneficial impact of imposing such conditions. 'Labelling' through making clear to recipients the purpose of the transfer may serve the same function as conditions, with a much-reduced administrative cost.[89]

The transfer must be big enough to have an impact on children's nutritional status: evidence suggests that it should be equivalent to approximately 30% of household consumption. Transfers should be regular (eg, monthly) and index linked according to regularly monitored local prices. Ideally, the programme should include a mechanism to increase the size and regularity of the transfer in times of emergency. The nutritional impact of cash transfers could be further enhanced by delivering vouchers for specific nutritious foods alongside cash, and by creating formal links to other services that are needed to support the health and nutrition of children and women.

Many countries in Africa are now starting to invest in social protection programmes with a cash transfer component. However, the political context for these commitments varies. In certain contexts that are prone to frequent emergencies and where hunger and malnutrition have a strong political resonance, governments are considering designing a safety net that can act as a channel for delivery of humanitarian aid provided by international agencies on an annual basis. This can ensure that the aid is more predictable for communities and also help to move beyond only in-kind assistance. In certain contexts it can be appropriate to have an interim safety net programme targeting the hungry and malnourished, which could be used as a stepping stone towards universal child and maternity benefits. The Ethiopian government has implemented such a scheme and reaches 8.3 million people (11% of the total population) with its Productive Safety Net Programme (PSNP). It provides cash or food transfers in the lean season through a public works programme, although 20% of recipients receive a free transfer because they are unable to work. It also includes a contingency fund amounting to 20% of the programme's budget to respond specifically to emergency situations. The programme costs approximately US$230 million a year. PSNP has contributed to a slow but progressive accumulation of assets by households and communities who receive the safety net assistance. However, if households are to afford a nutritious diet, the transfer must be increased and linked to the price of staple foods. Also, targeting of recipients needs to be more accurate and distribution of the transfer more timely.

What do we mean by social cash transfers and safety nets?

Short-term emergency or seasonal safety nets ensure household food security and prevent the sale of vital livelihood assets. Social cash transfers are usually delivered by governments on a permanent basis for the purpose of addressing poverty and vulnerability.[90]

Package component 5: Fortified foods

A good-quality diet can be expensive; even if families are receiving cash transfers, they still may not be able to afford a diet that meets all the nutrient requirements of young children. Micronutrient supplements (delivered through the health system) provide nutrients (in the form of tablets or capsules) at critical moments during pregnancy and during a child's development, but are not intended to cover the full range of micronutrients required for optimal growth and health. The inclusion in the diet of foods fortified with micronutrients can ensure that women and children consume a wider range of nutrients and on a longer-term basis. This can be achieved through three key routes: by large-scale fortification of commodities that are eaten by most people (such as flour or sugar); by using fortification products for use in the home, such as water-dispersible or crushable tablets or spreads (micronutrients to be added in small quantities to meals); or by adding to the diet food products (manufactured or blended) designed specifically for pregnant women or young children.

The balance of each of these in any national strategy will depend on factors such as the nature and distribution of micronutrient deficiencies, poverty levels, accessibility of target populations and the nature of traditional diets. The private sector is playing a critical role in developing the technology needed for food fortification and various products are rapidly emerging, increasing the intervention options available. The key challenge is to find a mechanism for reaching the poorest households in a *sustainable* way. This will involve moving beyond traditional (supplementary) feeding programmes delivered through time-bound projects funded by overseas development assistance, to ensuring the permanent inclusion of micronutrient-rich foods in the diets of women and children for the purpose of malnutrition prevention. The strategies for achieving this will vary hugely, depending on the country; for example, the strategy appropriate for Vietnam is likely to be very different from that for Sudan. Linking entitlement to these products to cash transfer or voucher programmes may help to ensure the poorest people are reached.

While home fortification or fortification of commodities do not undermine the nutritional benefits of traditional diets (but instead add critical nutrients to them), the introduction of new food products carries a higher risk. Care needs to be taken to prevent products from displacing breastfeeding, replacing traditional foods or cooking practices, or leading to a reliance on processed foods. The latter may be detrimental to public health in the long term by contributing to the double burden of childhood malnutrition and adult obesity.

As a result of successful pilots, in 2007 the Bolivian government introduced a multiple micronutrient powder as part of its national nutrition strategy, providing the product free of charge to approximately 750,000 young children.[91]

Package component 6: Education on nutrition and hygiene practices

Components 1 to 5 outlined above go a long way to ensuring that young children and pregnant women have access to a nutritious diet. There is still a need, however, to make sure that families are given information about nutrition, including how to prepare food and feed their children and themselves appropriately and safely. In many countries, access to information about nutrition and hygiene is patchy and practices persist that are not explained by the fact that households have low incomes.[92, 93] The reasons why it is difficult to improve the way in which families prepare food and feed their children include: social pressures, lack of social support networks, and cultural beliefs and perceptions concerning the feeding of infants and young children.[94] In the case of hygiene practices, another major barrier is limited access to clean water. As mentioned previously, although investment in water systems is crucial, it has not been included as part of this 'child hunger package'.[95]

Education specifically about nutrition has been found to have a small impact on child malnutrition,

but it tends to be most effective among food-secure populations or as part of a holistic package, particularly, for example, if families are also given a food/cash transfer.[96] Effective nutrition education should be prioritised over the more burdensome process of growth monitoring and promotion (GMP), which often results in the neglect of the more complex part of effective education messages.[97] A recent review showed that education on hand-washing can reduce the risk of diarrhoea by 30%.[98] Safe preparation and storage of food (including hand-washing) is, in fact, one of the guiding principles for feeding young children and thus should be included when necessary in nutrition education.[99]

There are three essential components of a good nutrition and hygiene education programme. First, messages must be simple, specifically designed for the people who are being educated, and based on an understanding of the contextual barriers to change.[100, 101] For this to be achieved, it is crucial that communities themselves are fully involved in the process. Second, the education needs to be delivered through multiple channels: messages should become omnipresent.[102] Third, the principal means of communicating nutrition/hygiene messages should be via healthcare providers, but in situations where the health system is overstretched, using community educators can be successful. However, they do need to be appropriately trained, motivated and linked into the formal systems.[103, 104]

Package component 7: Reducing risk, early warning and response

Emergencies triggered by climatic events, market fluctuations or conflict are becoming more frequent and they inevitably place children at even greater risk of malnutrition, particularly acute malnutrition. This means that governments need to have in place information systems that make it possible to conduct vulnerability analysis, map the risks that different communities are exposed to, predict when crises will occur, and trigger appropriate responses. These information systems should provide the basis for long-term planning (design of safety nets, emergency preparedness and risk-reduction strategies that cross government departments) and for rapid response in times of emergency. Lack of preparedness and early warning among communities prior to the landfall of Cyclone Nargis in May 2008 exacerbated the devastation and loss of life in the Delta of Myanmar and continues to have economic consequences.

Early intervention in emergency situations can prevent an increase in acute malnutrition, and save a lot of money. In Niger in 2005, it would have cost $1 a day per child to prevent acute malnutrition among children if early warning information had been followed up. By July 2006, the cost of saving a malnourished child's life in an emergency response operation was $80.[105] Vulnerability analysis systems exist in some form in many countries but often they are not as effective as they should be at communicating the right types of information, at the right time, and in the right way to achieve action.[106] Common challenges include situations in which: a) decision-makers may be provided with conflicting analysis of situations and recommendations for response by different agencies; b) decision-makers may lack resources and motivation to respond despite the evidence; and c) the type of resources available restricts the range of responses that can be implemented.

To increase the likelihood of early and preventive action, the information provided must be relevant to decision-makers, be communicated clearly, and predict the future risks and severity of the situation as well as describing the current situation. Governments should resource and coordinate vulnerability analysis systems effectively with stakeholders, promoting transparency, accountability and consensus among agencies regarding actions to be taken. The Integrated Food Security Phase Classification (IPC) is an example of such an approach, and includes many of the key humanitarian actors[107] involved in food security analysis and implementation. Analytical frameworks should be based on understanding of livelihoods, vulnerability and nutrition (eg, the Household Economy Approach).

Package component 8: Treatment of severe acute malnutrition

This final component of the package is there for when the components outlined above do not reach children who need them and they become acutely malnourished to a dangerous degree. Protocols for treating acute malnutrition are now well understood and include as a core component the provision of ready-to-use therapeutic food (RUTF). These protocols are widely used by humanitarian agencies, but are rarely applied within routine health services, even though acute malnutrition is common in non-emergency settings.

Every year, nearly 400,000 children under five die as a result of severe acute malnutrition.[108] Only about 5% of the 19 million children worldwide with severe acute malnutrition are treated,[109] yet the efficacy of the in- and outpatient model of treatment of severe acute malnutrition in emergency settings has been widely proved.[110, 111] Of the 23,511 severely malnourished children treated in 21 community-based therapeutic care programmes in Malawi, Ethiopia, and Sudan between 2001 and 2005, only 4.1% died, 79.4% recovered and 11.0% left the programme before treatment was complete.[112, 113] In Ethiopia the government has mainstreamed the management of severe acute malnutrition into its Health Extension Programme, protocols have been standardised, RUTF is now produced locally and is included on the essential drug list, and a referral mechanism has been created. In 2008, 24,500 extension workers had already been deployed and 3,200 supervisors trained. As a result of this effort, the scaling-up of treatment in response to the food crisis in mid-2008 was much faster and more effective, particularly where non-governmental organisations (NGOs), including Save the Children, provided logistic, technical and financial support.

Given the burden of acute malnutrition and its contribution to child mortality, treatment should be integrated into basic packages of health services, particularly in countries where prevalence rates are high. There are four key elements of Community Management of Acute Malnutrition: 1) mobilisation of communities to ensure that they are aware of the services available and how to access them; 2) outpatient treatment using standardised drug protocols and RUTF; 3) inpatient stabilisation care in tertiary-level facilities for children with medical complications; and 4) effective monitoring and referral to ensure that the treatment responds to the child's changing needs. For this to be achieved, a national protocol must be agreed and a plan developed for scaling up services during humanitarian emergencies.

Moderate acute malnutrition presents a significant challenge in many emergency situations and traditionally it has been tackled through treatment using blended, fortified foods. There is now considerable research under way to investigate whether alternative approaches to treatment may be more effective. Moderate acute malnutrition rates may also be significant in poor communities even where there is no emergency but, given the numbers of children affected, it is rarely possible for health services to treat these children. The package presented above focuses on preventing, rather than treating, moderate acute malnutrition in non-emergency settings.

3 The price tag

Delivery of the child hunger package requires money and political commitment. In this chapter we outline our estimates for the cost of the package and in the next chapter we set out the arguments for increased political commitment.

We estimate the cost of the package to be about US$127 (range 62–239) for each child under two years and US$47 (range 17–105) for each pregnant woman per year (see Table 5 below). These are not the additional costs but the total cost, before existing spending and existing coverage of package elements are taken into account. However, coverage of many elements of the package is currently very low, with the exception of vitamin A supplementation.[114] These costs should be seen as a front-loaded investment in a child's life which sets them on course for the future. Returns on this investment are seen throughout the rest of the child's life, through reduced pressure on health services, better performance in school and greater economic productivity in adult life. For the eight focus countries the total cost is US$8.8 billion per year. This equates to an average of 1.63% of GDP for the eight focus countries, excluding DRC (see Table 6 on page 26).

Table 5: Annual costs of nutrition package per child under two and per pregnant woman

	Cost (US$)	Cost range (US$)	Sources of data
7 breastfeeding contacts, mass media and nutrition education on complementary feeding	18.0	16–20	115, 116, 117, 118
Micronutrient supplementation – vitamin A	0.6	0.5–0.75	119, 120, 121, 122
Micronutrient supplementation – therapeutic zinc	1.6	1.6–1.6	123, 124
Micronutrient fortification (home)	5.4	5.4–5.4	125
Child benefit	88	33–190	126
Treatment of severe acute malnutrition	13.4	5.7–21.1	127, 128, 129, 130
Total cost per child under two years	**127**	**62–239**	
Micronutrient supplementation – iron/folate	4	1.1–11	131, 132, 133, 134, 135
Maternity benefit (PPP)	43	16–94	136
Total cost per pregnant woman	**47**	**17–105**	

Note: The methods for these estimates can be found in the methods annex at www.savethechildren.org.uk/hungryforchange

Table 6: Total cost of nutrition package

	Average annual cost of package (2009–15) US$ millions	% GDP
Afghanistan	362	4.3
Bangladesh	648	0.9
DRC	963	10.8
Ethiopia	543	2.8
India	5,268	0.4
Kenya	430	1.8
Sudan	371	0.8
Vietnam	247	0.4
Total / average	**8,831**	**2.8**

Many governments are already funding some aspects of the package directly and often are funding the delivery systems required for certain package components. Donor funding is currently pitifully low for direct nutrition interventions and contributes an estimated US$2 per child under the age of two for direct nutrition interventions in the 20 worst-affected countries.[137] However, donors are also investing considerable resources in social cash transfers, early warning systems and agriculture. Although these investments may not be designed to reduce malnutrition, with minor modifications they could have a considerable impact on nutrition.

It should be noted that all costs given here are only very broad estimates. Costs vary hugely between countries and depend on the systems already in place for the provision of key services. For example, in situations where micronutrient supplements have been budgeted for and can be easily provided through the health system, costs will be much lower than when supplements are not covered in health budgets and a specific delivery system has to be set up. In addition, methods for estimating costs vary considerably in the published literature. We try to capture this variation by presenting large ranges around the estimates. For most package components, these estimates are based on published literature. For the cost of child benefit and maternity benefit we use figures drawn up by Save the Children.[138] In these estimates, we assume a transfer value per person sufficient to fill the gap between the average income level for those individuals below the poverty line and the US$1.25/day poverty line used as the poverty indicator in MDG 1. These estimates were then adjusted to give real values. For four countries, assuming there are at least two transfer recipients in a household, this level of benefit per transfer is sufficient to translate into the target range of 20–30% of household income (see Package component 4). For the remaining four countries (Bangladesh, Ethiopia, India and Vietnam) transfers may need to be a little larger. We also assume in the costing that breastfeeding support and nutrition education will be provided by the same system, so we have not itemised these separately.

The costs of specific elements of the package are similar to those recently estimated by the World Bank.[139] That package costs US$29 per child under five, while our estimate is per child under two years. It does not include the cash transfer, which we have included, but does include food products for the prevention and treatment of moderate malnutrition. There are also some methodological differences, but broadly our estimates are in line with the World Bank's.

Three components of the package not costed here are: improving the quality of investments

in agriculture; Vulnerability Analysis systems; and the cost of deworming for children under two and pregnant women. We anticipate the cost of the first of these to be negligible. Information systems are inexpensive when set against the costs of humanitarian response. For example, the government of Ethiopia, in close collaboration with implementing partners such as Save the Children and FEG Consulting and with funding support from USAID and other donors, has constructed during the past few years an early warning system covering the whole country. Ethiopia is a large country with considerable variations in climate and livelihoods, and an understanding of both of these is necessary in order to assess how shocks may affect the approximately 82.5 million people. Investments totalling US$1.8 million per annum during the previous four years have provided for the development of a new system of early warning that informs the government and humanitarian community. A breakdown suggests the system costs just over two US cents per person per year and represents only 0.04% of total humanitarian funding (taking the average of humanitarian funding in 2003, 2005 and 2006). Running costs will decline gradually, once the start-up investments in human capacity, communication and 150 livelihood baselines have been made. Finally, at present there are no operational cost data for deworming among the under-twos and pregnant women.[140]

4 Politics and progress

The proposed package, if fully implemented, promises to make significant gains in improving birthweight, breastfeeding rates and the quality of young children's diets. The key question is how to make this happen? There are four reasons why reducing malnutrition is a political imperative.

First are the economic rewards. Globally, it is estimated that the direct cost of child hunger and undernutrition is between US$20 billion and $30 billion per annum.[141] Chronic malnutrition affects physical growth and brain development and stunted people have been estimated to have an average yearly income deficit of almost 20% compared with their non-stunted counterparts.[142] The economic impact of undernutrition is also significant at country level, leading to losses in GDP running as high as 3–6%,[143] caused by lower productivity and income. It's worth noting that the most expensive component of the package – the social cash transfer – has also been shown to deliver a high return on investment. In South Africa, the government's generous child support grant delivers a rate of return that is 160–230% greater than the cost of the grant, through the value of recipients' increased earnings.[144]

The Copenhagen Consensus 2008 – which is the work of eight of the world's most distinguished economists, including five Nobel laureates – listed combating malnutrition as the best development investment. They came to this conclusion after considering investments across ten different areas, including global warming, education, disease and trade. Specifically, the provision of vitamin A and therapeutic zinc to 80% of 140 million children under the age of two in developing countries would cost just US$60 million per year, according to the analysis, but would yield annual benefits of more than US$1 billion. This means that "each dollar spent on this micronutrient programme would create benefits (eg, better health, fewer deaths, increased future earnings, etc) worth more than 17 dollars".[145]

Second, nutrition commitments can help money go further and in an economic downturn this makes good sense. Many existing investments in agriculture, social protection, gender and health have huge and possibly unrealised potential to reduce malnutrition. With minor adjustments in design, programmes could achieve results without discernible impacts on their original objectives. At the same time, if women and children were better nourished, progress towards all the MDGs would be faster. In this sense, nutrition investment is a foundation for development. Better nutrition improves school outcomes, reduces child and maternal mortality and improves the effects of anti-retroviral therapy for people living with HIV and AIDS, thereby making investments in MDGs 2, 3, 4, 5 and 6 go further. So there is a virtuous circle where reorienting investments at relatively low cost could achieve a greater impact on nutrition as well as making investments in key basic services more effective in the long run.

The third reason is that good governance attracts external support. High levels of chronic malnutrition are an indictment of the quality of governance.[146] Malnutrition rates are not only an objective measure of progress in development, able to

reflect investment in a variety of sectors, but they also indicate whether the poorest families are being reached and therefore whether an equitable development agenda is being pursued. Countries demonstrating good governance are firm favourites for bilateral and multilateral donor support; thus, improvements in nutrition could potentially trigger greater international support.

The fourth reason for political commitment to reducing malnutrition relates to political stability and state responsibility. In 2008 food riots broke out in many cities across the world because prices rose beyond people's ability to cope. These uprisings were a strong manifestation of governments' failure to take the necessary actions to prevent a human-made crisis. The right of all people to be free from hunger and to have adequate food is enshrined in the International Covenant on Economic, Social and Cultural Rights (ICESCR) and the 1989 UN Convention on the Rights of the Child. Human rights are not optional. States' ratification of human rights standards, such as the ICESCR, imposes legal obligations on them and makes them accountable for respecting, protecting and fulfilling human rights set out in those legally binding instruments. In December 2008, an Optional Protocol to the ICESCR was unanimously adopted by the UN General Assembly. If ratified by ten states, the Committee on Economic, Social and Cultural Rights will be able to receive and consider communications from victims of rights violations who are not able to get an effective remedy in their domestic legal system, and will provide them with an avenue to get redress. The right to food, championed by the UN Special Rapporteur on the Right to Food, has gained unprecedented momentum and has become central to the policy response to food insecurity.

The lack of serious action by governments and their failure to deliver on their commitments have led to the creation of a new campaign, led by civil society organisations (CSOs). The campaign aims to raise the level of government commitment and accountability on hunger and malnutrition. It is calling on governments to sign a country-specific Declaration of Commitment on the eradication of hunger and malnutrition by 2025 at the latest.

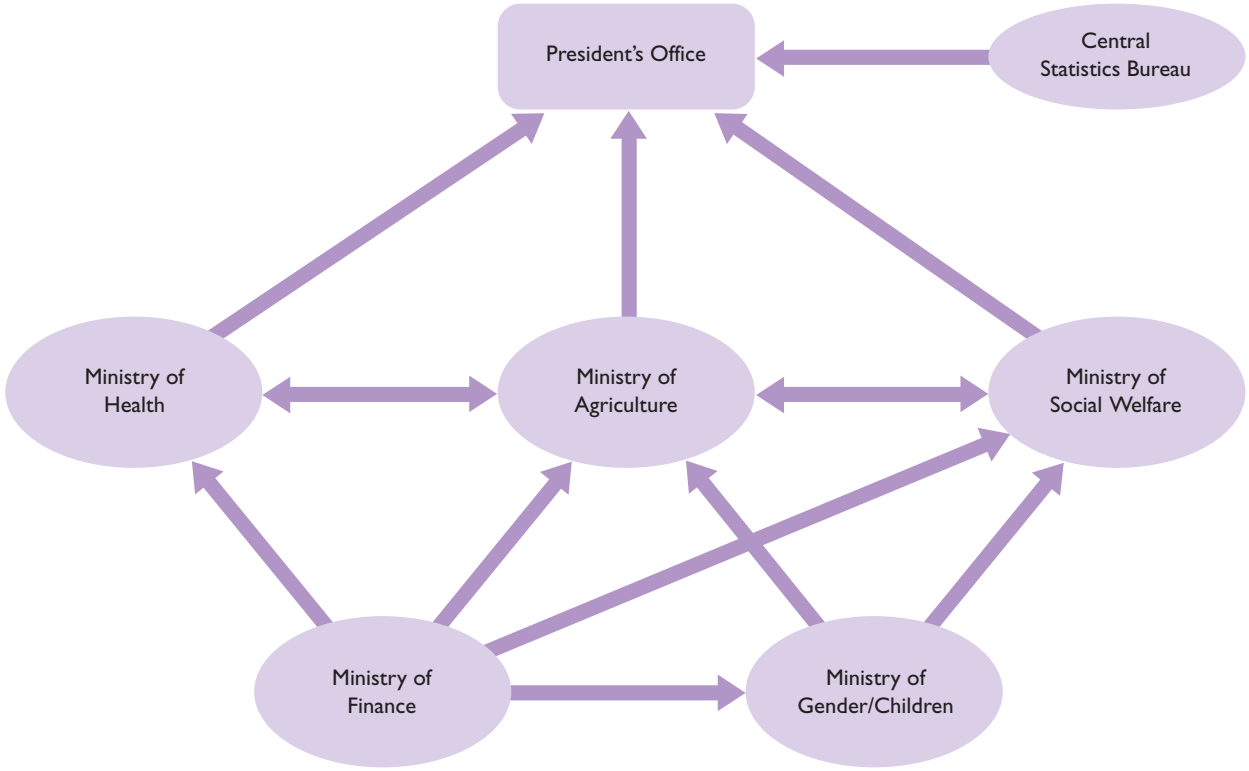
Getting the institutional structures right

Once a government has decided to make malnutrition reduction a top priority there is a further challenge to getting the desired results. The package presented in this report would normally be delivered by a range of line ministries. Malnutrition is typically everyone's business, but no one's responsibility. With responsibilities shared across a group of ministers there is a danger that no one ensures progress is made. One possible model (Figure 9, page 30) places the leadership at the heart of government in the president's office, with clear lines of responsibility within relevant line ministries. A similar model has been followed in Madagascar, where a National Nutrition Office has been set up to coordinate efforts to combat malnutrition. This office is overseen by a National Nutrition Council, which is chaired by the prime minister.

There must also be initiatives (funded by government, donors and CSOs) to build national political momentum in the fight against hunger and malnutrition in children, in order to create an environment in which institutional change and resource mobilisation is possible. These initiatives should include champions at the highest level of political leadership and national alliances of CSOs and UN agencies to work with government to agree priorities and push for rapid progress.

While it is important that governments get the right structures in place to deliver fast reductions in malnutrition, international agencies must do likewise. One of the reasons for the painfully slow progress in reducing malnutrition has been the fragmented and dysfunctional nature of the international system. Although there are a number of initiatives that have the potential to raise the profile of nutrition at country and global levels, there is no functioning mechanism for coordinating all UN agencies, and none of these initiatives yet commands real political attention. As is the case with national government structures, there needs to be a global mechanism for ensuring that nutrition

Figure 9: Model for top-level leadership and coordination on nutrition



Note:

President's Office – coordinates action and ensures progress is made

Central Statistics Bureau – monitors results

Ministry of Agriculture – responsible for agriculture programmes that maximise nutritional impact; a disaster early warning system; micronutrients fortification

Ministry of Health – responsible for micronutrient supplementation; breastfeeding support; nutrition education; policies to support breastfeeding; treatment of severe acute malnutrition

Ministry of Gender/Children – assists with design of agriculture and social welfare programmes to maximise positive impacts on women and children

becomes a political priority for all governments and that international assistance is provided in a manner that complies with the Paris Declaration on aid effectiveness. Nutrition priorities must be well integrated into efforts to address global food insecurity and health.

Human resources are crucial

The final challenge in translating commitments into real changes in children's nutritional status, is securing the human capacity needed to get the job done. This capacity may be found in local communities themselves, local authorities, health service staff, social welfare staff, NGO and UN programme staff or private sector employees. However, there is a scarcity of people who understand the threats to good nutrition and have the skills to design and run effective strategies to tackle them. Half of the 20 countries that have 80% of the world's stunted children reported having minimal or no high-quality training in nutrition available in national institutions.[147] However, it's not just nutritionists who are needed; we need agriculture specialists, social workers, social policy experts and health service providers who can orient their work towards improved nutrition. This gap must be urgently addressed by national and international institutions if progress is to be made.

Building on success in the eight focus countries

Although the task of getting malnutrition reduction back on track presents a considerable challenge, we're not starting from scratch. There is much to build on.

Afghanistan

In Afghanistan, there are therapeutic feeding units for acutely malnourished children in most of the provincial hospitals. These could provide the institutional basis for much wider scaling-up of treatment of acute malnutrition in the community. The World Food Programme is embarking on a pilot cash transfer programme for families living in Kabul. This would provide an excellent starting point for considering wider coverage of a cash-based safety net. The low rates of exclusive breastfeeding are a major concern and acute malnutrition of children under the age of six months is common in Afghanistan. In the context of extreme resource constraints, more support for breastfeeding could be the most cost-effective start to tackling the nutrition problem.

Bangladesh

In Bangladesh, there has been considerable progress in improving access to zinc supplementation through the SUZY programme and the country has also achieved extremely high vitamin A supplementation coverage. Bangladesh is one of three countries (Ethiopia and Vietnam being the other two) where a Gates-funded programme ('Alive and Thrive') will focus investment on scaling up support to breastfeeding and complementary feeding. Bangladesh also has a whole range of safety net programmes run by government and NGOs, and considerable effort is being put into making micronutrient powders available. Building on these successes, steps should be taken to identify and fill gaps in the ability of programmes to provide safety nets specifically for supporting the diets of children under 24 months and pregnant women, and also to ensure that safety net assistance actually reaches the poorest families.

Democratic Republic of Congo

In DRC, the work of the ProNaNut, the nutrition wing of the Ministry of Health, provides an excellent basis for expanding the treatment of severe acute malnutrition into the community. The network of Relais Communautaires has a potentially important role to play in this, as well as in the provision of breastfeeding support, provided their staff can be adequately trained and remunerated. The level of vitamin A coverage is low, and priority given to investment in increasing this level would be highly cost effective.

Ethiopia

In Ethiopia, which has the largest hunger safety net programme in Africa, there is much good work to build on. Given the huge potential of the PSNP (Productive Safety Net Programme) to help families to afford a better-quality diet for pregnant women and children under the age of two, Ethiopia has a ready-made system that could be harnessed to dramatically improve complementary feeding and at the same time demonstrate real leadership across the region. For this to happen, the size, content and targeting of PSNP transfers must be considered, in addition to links to complementary nutrition services, to maximise nutritional impact. The National Nutrition Strategy (NNS) is overseen by the Federal Ministry of Health. Progress has been made since its launch last year, including the formation of a National Nutrition Co-ordination body (which includes representatives from a number of ministries). However, in order to maintain momentum, a nutrition champion is needed at the highest political level. This is also needed to ensure effective co-ordination and implementation of the National Nutrition Programme. All major donors to nutrition in Ethiopia are funding their own vertical programmes and some are also funding the NNS. If there is to be major progress on reducing malnutrition, it is essential that donors align their resources behind a single government plan rather than tackling the problem in a piecemeal, uncoordinated and potentially duplicative and competing manner.

India

In India, there are many initiatives in place which could accelerate progress in reducing malnutrition if only their potential could be realised and translated into concrete action at local level. The Prime Minister has set up a Council on Nutrition and also has agreed to a doubling of funding for the Integrated Child Development Service (ICDS). The Finance Minister, Pranab Mukherjee, in his recent 2009/10 Union budget speech, stated: "By March 2012, all services under ICDS would be extended, with quality, to every child under the age of six." In 2008, a Coalition for Sustainable Nutrition Security was formed, bringing together private and public sector leaders to push for faster action to address malnutrition. Tamil Nadu state has recently taken a very significant step in providing a cash grant to pregnant women in the last trimester, and to cover the first three months after birth. This provision has now been included in the federal 11th five-year plan and is likely to be rolled out to other states. The experience could be extremely useful for other countries with high rates of low birthweight and malnutrition. In addition to all these new developments there is a whole range of safety net programmes in place that could contribute to malnutrition reduction if they were implemented comprehensively and reached the poorest. In India, the key barrier to progress is not necessarily insufficient resources or top-level commitment, but weak nutrition governance at local, state and national levels, poor coordination across ministries and a lack of capacity to translate policies into real changes in the lives of the poorest children.[148]

Kenya

In Kenya, as in Ethiopia, large-scale social transfer programmes are getting under way and have huge potential to reduce malnutrition and protect children from seasonal nutrition shocks. The government's 2008 Child Survival and Nutrition strategy proposes lactation management centres for five provincial hospitals which could provide the starting point for much wider expansion of breastfeeding support for mothers, which is urgently needed, given Kenya's extremely low exclusive breastfeeding rates.

Southern Sudan

The government of Southern Sudan's Ministry of Health, backed by UNICEF and other partners, has recently unveiled a programme to reduce child and maternal mortality using the Accelerated Child Survival Initiative (ACSI). ACSI delivers an integrated package of life-saving services including polio and measles vaccination, deworming, provision of vitamin A supplements and anti-malarial mosquito bed nets, along with the promotion of good health practices such as breastfeeding and hand-washing, which is aimed at ensuring increased benefits for children under five. Frequently in Southern Sudan there are seasonal and predictable emergency situations followed by crisis assessment and a delayed response. There has been very little progress in moving policy responses forward to tackle predictable problems in a systematic manner and at a structural level. Part of the solution involves tackling the economic difficulties households face in getting access to nutritious food. There needs to be a more sophisticated approach to protecting the poorest and most food-insecure, using safety nets in the form of predictable cash transfers that can be used to improve dietary diversity and increase food consumption. Save the Children has moved ahead with an innovative cash transfer programme in northern Bahr el Ghazal to demonstrate that cash interventions can improve access to more nutritious food. Learning from the project will be used to foster a debate on social protection measures and policies.

Vietnam

In Vietnam, significant progress has been made over the last two decades in reducing acute malnutrition and in delivering essential services, including the provision of vitamin A supplements. The government has now shifted attention to the persistently high rates of stunting, and the National Institute of Nutrition is currently finalising the Plan of Action to Accelerate Reduction of Stunting (PAARS). This plan will target pregnant women and children under two and build on the recommendations made in *The Lancet* nutrition series. The prevalence of stunting is highest among children from the poorest communities, and the

quality of diets remains a problem. These efforts need to be further strengthened by looking at how existing social protection mechanisms and food production initiatives can be better directed to improving nutrition, particularly for the poor. Although the PAASR does mention the importance of cross-cutting issues such as poverty reduction and improving food production, the vertical nature of the line ministries in Vietnam can make it difficult to develop integrated programmes. Thus representation and coordination of nutrition across ministries will need to be improved, particularly at provincial level. Increasingly, it is at this level where the majority of planning and budget allocation takes place, so the best opportunity for intersectoral integration is through the annual provincial-level planning processes. A major outstanding challenge in Vietnam is to achieve better regulation of the promotion of infant formula. Although the International Code is law in Vietnam, it is still not being enforced and additional support is needed to do so. Unless this happens, investment in breastfeeding promotion will be seriously undermined.

5 The priorities for governments, the UN and civil society

Malnutrition is widespread, affecting one in three children in developing countries. The nutrients that prevent it are found in many readily available foods including eggs, milk, fish, meat and oil. However, millions of pregnant women and children under two years of age do not get these foods in the quantities needed and the consequences are permanent, leading to cognitive impairment, stunting and death. The critical 33-month period when a lifelong difference can be made to a child's nutritional status is both a blessing and a curse. If missed, another generation of children, if they survive, bear the scars into adulthood. If targeted, results are immediate and progress can be quick and easily measured. In this report we present a package of actions which, if implemented fully, could make a dramatic impact on the ability of pregnant women and children under two to get a nutritious diet. The political will is all that's missing.

There is a strong case for investing in nutrition: it produces results in the short term, has long-term impacts on the economy and helps to make investments in other sectors go further. Nevertheless, nutrition is typically accommodated in a strategically weak part of the ministry of health. It is rarely considered as an investment opportunity for national growth and prosperity. These investments build a future generation of children who survive, who are better able to learn in school and who grow into adults who can be productive workers and effective parents.

There are six years to go before a final judgement is made on whether or not MDG 1 is reached. New political energy is in abundance as new factors have converged: hunger is a higher political priority and the science and the solutions have become clearer. MDG 1's target for the proportion of underweight children could be achieved and the lives of three generations of two-year-olds could be transformed. To do this:

1. Governments of the 36 countries with the highest levels of malnutrition must seize the hunger and child survival agenda, assign top political leaders to oversee it and ensure that a coordinated effort across line ministries is achieved. Malnutrition reduction, on the scale and in the time frame required, will never be achieved if it is seen as solely the job of the ministry of health. Governments in donor and severely affected countries should support the development of country-specific Declarations of Commitment on the eradication of hunger and malnutrition by 2025.
2. Citizens of these 36 countries must form a much stronger and more effective lobbying force to push for faster, evidence-based action. They should engage in a collective and international civil society campaign to eradicate hunger and malnutrition and to hold governments to account. Donors must fund this work where needed.
3. The World Bank and UN agencies that work on nutrition must agree to coordinate their efforts and maximise the comparative advantages of each institution. The nutrition sector is currently cluttered with multiple initiatives, none of which is succeeding in pushing nutrition up the political agenda. These initiatives must add up to greater impact rather than cancelling one another out. At individual country level, international agencies must align themselves behind a single government plan.

4. Malnutrition reduction must be a priority for the International Health Partnership, future partnerships on agriculture, food security and nutrition, and any new funds for scaling up safety nets and social protection. These initiatives and funds must translate into effective, coordinated action at country level, and changes in the numbers of underweight children, particularly among the poor, should be a key measure of progress.
5. National and international systems for monitoring the food security and nutrition situation must be improved. We need to know how the diets and nutritional status of young children are being affected by global events in time for action to be taken quickly, rather than years after a crisis has occurred.
6. The private sector must play a crucial role in supporting the development of nutrient-rich products that treat and prevent malnutrition, and work with public sector agencies to ensure that these are accessible to the poorest women and children. They must also make sure that the promotion of their products avoids contributing to low breastfeeding rates or to the double burden of malnutrition and obesity.
7. Bilateral and multilateral donors must prioritise and scale up funding to the countries with the highest burden of malnutrition and prioritise actions that target the critical 33-month period. They must work together to ensure that nutrition becomes an international political priority. They should ensure that no credible government plan to reduce malnutrition fails through lack of funds. They should also invest in mechanisms to further expand the evidence base on strategies to tackle stunting.

Notes

Introduction

[1] Being underweight is a different form of malnutrition from stunting and is a combined measure of stunting and wasting.

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[8] Source: www.childinfo.org

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[10] For all, the indicators for frequency and diversity of feeding are based on the recommendations in the 2008 report *Indicators For Assessing Infant And Young Child Feeding Practices* produced by USAID/FANTA, AED, UC-Davis, IFPRI, UNICEF and WHO:

- % of (breastfed) children aged 6 to 23.9 months fed with appropriate frequency (two times per day for infants aged 6 to 8.9 months and three times per day for infants aged 9 to 23.9 months)
- % of (breastfed) children aged 6 to 23.9 months fed foods from at least four different food groups
- % of (breastfed) children aged 6 to 23.9 months fed with minimal diversity and frequency

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[17] The Cost of a Diet study is: Save the Children UK, 2007 – see note 19. The HEA data came from: *Vulnerability and Dependency in Four Livelihood Zones of North Eastern Province, Kenya*, Save the Children, 2007

[18] Save the Children UK, *The Food Crisis: An analysis of the impact of the food price crisis on a rural Bangladeshi community*, 2009

[19] Save the Children UK, *A causal analysis of malnutrition, including the minimum cost of a healthy diet, El Wak, North Eastern Province, Kenya*, 2007. It should be noted that this study did not take into account wild foods not sold at the market.

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