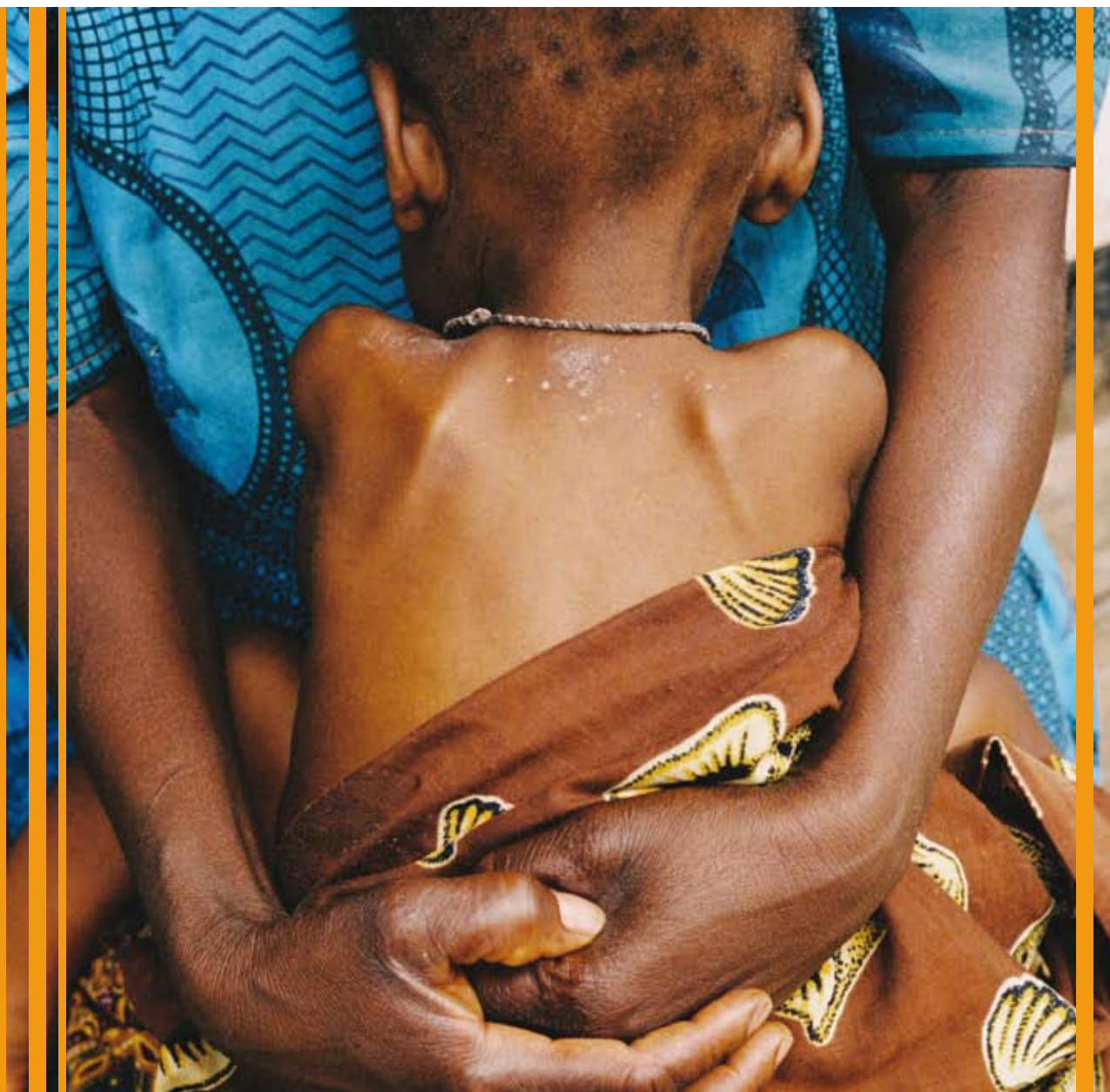


TAKING ACTION NUTRITION FOR SURVIVAL, GROWTH & DEVELOPMENT



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White Paper - May 2010

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This White Paper is the result of contributions from a wide range of Action Against Hunger | ACF International staff members and senior managers in its headquarters in London, Madrid, Montréal and Paris, and field programmes around the world. The document was prepared by Dr. Ellen Girerd-Barclay, Public Health and Nutrition Advisor to ACF, based on a working draft by Claire de Menezes. The technical contributions from Rebecca Brown and Amador Gomez are gratefully acknowledged. Bernadette Cichon, Nutrition Researcher, gathered background information, developed tables and designed figures. The document was developed under the general direction and vision of Mariana Merelo Lobo, Samuel Hauenstein Swan and Jean-Michel Grand of ACF-UK.

ACTION AGAINST HUNGER

Action Against Hunger | ACF International is a global humanitarian organisation committed to ending hunger and acute malnutrition. ACF works to save the lives of malnourished children while providing communities with sustainable access to safe water and long-term solutions to hunger. With 30 years of expertise in emergency situations of conflict, natural disaster and chronic food insecurity, ACF runs life-saving programmes in some 40 countries benefitting 5 million people each year. Our ultimate goal is to realise our vision of a world without hunger, a world in which all children and adults have sufficient food and water, equitable access to the resources that sustain life, and are able to attain these with dignity. ACF believes that acute malnutrition is a problem too great to ignore.



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TAKING ACTION NUTRITION FOR SURVIVAL, GROWTH & DEVELOPMENT

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INTRODUCTION

Food price spikes in 2008, followed by the global financial crisis in 2009 have brought food and nutritional security into the public view. Analyses of the potential and real effects of economic hardship on those families around the world who are already poor have revealed greater needs than ever before. At the same time, progress towards the Millennium Development Goals (MDGs) has slowed and, in some of the most affected countries, reversed. Worldwide attention on food and nutrition concerns has also revealed that the current level of resources invested in addressing hunger and malnutrition are far from adequate. While recent figures indicate that hunger affects up to a billion people, the world community continues to ignore the plight of most of the 55 million children affected by acute malnutrition.

For the past 30 years, ACF has worked in over 40 countries, providing assistance to some 5 million people suffering from hunger and malnutrition. Yet, without vastly increased resources, ACF has little chance of reaching all the children in need. For this reason ACF initiated a process of internal reflection in 2008 aimed at identifying the actions required to resolve acute malnutrition.

Taking Action: Nutrition for Survival, Growth & Development adds ACF's voice to a number of recent publicationsⁱ in advocating for increased attention to the problem of undernutrition. This White Paper, however, focuses on the urgent and life-threatening issue of acute malnutrition and is intended for policy-makers at global and national levels.



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i. DFID's *The Neglected Crisis of Undernutrition: Evidence for Action*; Médecins Sans Frontières' *Malnutrition: How Much is Being Spent? An Analysis of Nutrition Funding Flows 2004-2007*; Save the Children's *The Next Revolution: Giving Every Child the Chance to Survive and Hungry for Change: An eight-step, costed plan of action to tackle global child hunger*; USAID's *A Call to Action on Nutrition*, and the forthcoming World Bank and nutrition partners' *Global Action Plan for Scaling-Up Nutrition Investment*.

EXECUTIVE SUMMARY

Taking Action: Nutrition for Survival, Growth & Development attempts to unravel a complex picture, encouraging all potential partners in the fight against malnutrition to commit to one or more essential actions. *Taking Action* suggests a practical approach for local, national and global forces, using the solutions at hand, to resolve the persisting problem of acute malnutrition. It calls for expanded efforts to detect and analyse the causes of acute malnutrition; for setting priorities in each affected geographical area; and for developing comprehensive plans for treatment and prevention to save lives and avert life-long disability. In addition to improving and expanding the routine assessment of malnutrition in countries that are hardest hit, this White Paper calls for scaling up treatment of those most severely affected using available and tested methods. The White Paper also contends that actions must be taken both to prevent existing cases from worsening, and to address the root causes of acute malnutrition, thus preventing well-nourished individuals from becoming undernourished in the first place.

Taking Action: Nutrition for Survival, Growth & Development begins with a short overview of the intensity and scope of acute malnutrition, a review

of its possible causes and potential effects on society and an outline of how ACF proposes that both global and local communities might address it. *Taking Action* then outlines three key areas of priority: *diagnosis, treatment and prevention*. Diagnosis, treatment and prevention of acute malnutrition must be carried out by a wide range of agencies and institutions, working together in *partnership* to achieve results. *Coordination* of action is essential to ensure that fruitful working relationships are developed and nurtured at local, national and international levels, eventually constituting an effective global architecture for nutrition. In a world of competing priorities, strong, evidence-based advocacy is needed to convince decision-makers that nutrition and well-being are the foundations for all development, and thus worthy of greatly *increased human and financial resources*.

Taking Action: Nutrition for Survival, Growth & Development briefly presents ACF's proposed strategy for ending acute malnutrition, detailing five priority areas and proposing 25 essential actions to address acute malnutrition. The White Paper is thus an urgent call for a worldwide response to acute malnutrition to ensure survival, growth and development.



I. MALNUTRITION: A PROBLEM TOO GREAT TO IGNORE

The United Nations Standing Committee on Nutrition (UN SCN) asserts that hunger poses the gravest single threat to the world's public health (The Economist, 2008). According to Jean Ziegler, former United Nations (UN) Special Rapporteur on the Right to Food, the number of people suffering from hunger has increased every year since 1996: "Every five seconds, a child under 10 dies from hunger and malnutrition-related diseases." (Ziegler, 2008). At the November 2009 World Summit on Food Security, UN Secretary General Ban Ki-moon stated, "...more than 1 billion people are hungry; six million children die of hunger every year - 17,000 every day" (Ban Ki-moon, 2009).

About 55 million children under 5 years of age around the world are acutely malnourished or wasted as a result of sudden decreases in nutrient consumption, absorption or retention.ⁱⁱ Over a third of these children - an estimated 19 million children - suffer from severe acute malnutrition known as SAM (Black, et al., 2008). Without treatment, they are at imminent risk of dying.ⁱⁱⁱ Ensuring their access to treatment should be of the highest priority in the global fight against hunger. Yet, only about 3 to 9 percent of the children who need treatment actually receive it (MSF, 2008).^{iv}

The 2008 *Lancet* article on nutrition states:

"Malnourished children tend to become adults with worse health and lower educational achievements. Their own children also tend to be smaller. Hunger was previously seen as something that exacerbates the problems of diseases such as measles, pneumonia and diarrhoea. But, malnutrition actually causes diseases as well, and can be fatal in its own right" (Black, et al., 2008).

Box 1: Undernutrition in numbers

- 55 Million of children under 5 years of age affected by acute malnutrition in the world (The Lancet b; 2008)
- 19 Million of children under 5 years of age suffer from severe acute malnutrition (SAM) (The Lancet b; 2008)
- Maternal and child undernutrition is the underlying cause of 3.5 million deaths (The Lancet b; 2008)
- Severe acute malnutrition (SAM) contributes to 1 million child deaths every year (UNICEF / WFP / WHO / UNSSCN; 2007)



- ii. These figures, quoted from the 2008 *Lancet* series on nutrition, exclude kwashiorkor, and therefore underestimate the true global burden of acute malnutrition.
- iii. The figure will vary by season, and is an aggregate of surveys in different countries at different time periods.
- iv. Determining the estimated percentage of children with Severe Acute Malnutrition receiving treatment each year, ranging from 3 to 9 percent is based on quantities of RUTF produced in 2008, and considers estimates of both prevalence and incidence of SAM.

II. DEFINING THE PROBLEM

“Today, 55 million children under 5 years of age around the world are acutely malnourished. Over a third of these children, an estimated 19 million, suffer from the most severe form of acute malnutrition. Without treatment these children are at imminent risk of dying and of never achieving their full growth potential. Only 3 percent of these children are receiving treatment, even though acute malnutrition can be prevented and treated successfully. Solutions are known, tested and feasible.”

What is acute malnutrition?

Hunger refers to a global measure of food deprivation and food insecurity that takes all population groups into account. *Malnutrition* or *undernutrition* is the physiological outcome of hunger and/or illness and manifests itself in numerous *macronutrient* and *micronutrient* deficiencies. Macronutrients, including proteins and carbohydrates, supply the body's basic food requirements, while micronutrients - such as vitamins A and C, and minerals such as iron, iodine and calcium - are elements required in tiny amounts to ensure a broad range of body functions, such as growth and healing. Three forms of hunger-related malnutrition can be determined using body measurements or anthropometric data, and are described in detail in the box overleaf: 1) *acute malnutrition* or *wasting*, 2) *stunting* or *chronic malnutrition*, and 3) *underweight*. Acute malnutrition or wasting occurs when an individual suffers from current, severe nutritional restric-

tions, a recent bout of illness, inappropriate child care practices or a combination of such factors. It is characterised by extreme weight loss, resulting in low weight-for-height. A severely wasted individual suffers from *marasmus* and looks extremely thin, except in the case of *Kwashiorkor*, where fluid retention results in swelling, giving a deceptive impression of healthy weight. The White Paper focuses on undernutrition.

The high number of undernourished individuals in the world today is unacceptable with young children, who are the most vulnerable, bearing the brunt of the problem. In total, 55 million children suffer from *Global Acute Malnutrition (GAM)*, a term that includes both *moderate acute malnutrition (MAM)* and *severe acute malnutrition (SAM)*. Only about 3 percent - less than one million of the 19 million severely malnourished children - receive the lifesaving treatment they desperately need.



Box 2: What are the different degrees of undernutrition?

Undernutrition results from insufficient food intake, inadequate care and infectious diseases, or a combination of these factors. This comprehensive term includes being underweight for one's age, too short for one's age (stunting), dangerously thin for one's height (wasting) and deficient in micronutrients. Severely acutely malnourished individuals are very susceptible to infections and death. Although data on mortality related to SAM is scarce, case fatality rates of children hospitalized for acute malnutrition can range from 10 to 40 percent (Bejon et al., 2008).

1. **Acute malnutrition or undernutrition** reflects recent weight loss as highlighted by a small weight for a given height. A child suffering from acute malnutrition or undernutrition can be categorized as being either moderately or severely thin or wasted. Moderate wasting, also known as Moderate Acute Malnutrition or MAM is indicated by a weight-for-height <80 percent of the median (or between -2 and -3 Z scores or standard deviations from the median weight-for-height of the standard reference population). Severe wasting, also referred to as Severe Acute Malnutrition or SAM is characterised by the following clinical manifestations:
 - **Marasmus**, otherwise known as severe wasting (weight-for-height <70 percent of the median, or below -3 Z scores or standard deviations from the median weight-for-height of the standard reference population, and/or a mid-upper arm circumference (MUAC) less than 115mm in children under 5). A child with marasmus is extremely thin, with a wizened, 'old man' appearance.
 - **Kwashiorkor**, a manifestation of severe acute malnutrition, is indicated by bilateral pitting oedema. A child suffering from Kwashiorkor may not appear to be undernourished, because the body swells as a result of oedema. The additional water retained by the body increases the child's weight, so that it may be within normal limits. In its most severe form, Kwashiorkor results in extremely tight, shiny skin, skin lesions and discoloured hair.

Global Acute Malnutrition or GAM describes both moderate and severe cases of acute malnutrition (below -2 Z scores). The terms MAM, SAM and GAM are used by the UN to describe acute malnutrition.

2. **Stunting** is an adaptation to chronic malnutrition, and reflects the negative effects of nutritional deprivation on a child's potential growth, over time. Stunting can occur when a child suffers from long-term nutrient deficiencies and/or chronic illness, so that not only weight gain but height is affected. It can also be an outcome of repeated episodes of acute infections, or acute malnutrition. Stunting is classified by low height-for-age, indicating a restriction of potential linear growth in children. Because it negatively and often irreversibly affects organ growth, stunting is strongly linked to cognitive impairment.
3. **Underweight** is an effect of both wasting and stunting, and is therefore a composite indicator of general malnutrition. It is measured by low weight-for-age in children, or low weight-for-height in adults, and is an outcome of either past or present undernutrition. The index does not indicate whether the child has a low weight-for-age because of inadequate weight or because of a small stature for his or her age, and therefore cannot distinguish between chronic and acute malnutrition.

What is the scale of the problem?

In the past two decades, the world has seen fewer and fewer large-scale food emergencies. While the disappearance of the devastating famines that dominated headline news in the 1980s might mean that malnutrition in developing countries is no longer an issue of concern, this is far from today's reality. Hundreds of millions of people worldwide continue to go hungry, with their access to food and nutritional status threatened by conditions that are far less well-publicised than severe famines. In addition to conflicts, both long-term and acute, unstable market prices, natural disasters and the negative effects of climate change continue to prevent households from finding enough to eat. Many countries suffer additionally from the devastating social and economic impact

of the HIV (Human Immunodeficiency Virus) and AIDS (Acquired Immune Deficiency Syndrome) pandemic.

In 2007, an estimated 854 million people suffered from chronic hunger and undernourishment. In 2008 the number had risen to 923 million, and by mid-2009 had surpassed 1 billion. Worldwide, the numbers of hungry and undernourished people are on the rise, despite the fact that the world already produces enough food for its 6 billion inhabitants and in theory could feed double that figure (Ziegler, 2008).

The global prevalence rate of SAM^v ranges from about 3 to 5 percent, affecting about 19 million children in total (WHO, 2007), while the estimated prevalence rate of GAM is about 13 percent (UNICEF 2009).

Table 1: World's hungry people (in millions) 1990-2015 (FAO, The State of Food Insecurity in the World 2002-2009)

Year	1990	1995	2005	2007	2008	2009	2015 Goals
Hungry people in the world (millions)	842	832	848	854	923	1,000	600 ^{vi}



v. Weight-for-height Z score of less than -3

vi. 1 billion hungry people today make up about 1/6th of the world's population of 6 billion. MDG 1, to halve the proportion of hungry people between 1990 and 2015, would equal 1/12th of the estimated population in 2015, or 7.2 billion, which is 600 million people.

The map below (Figure 1) shows the SAM prevalence among children below 5 years of age at country level in the two most affected regions. Countries with

the highest SAM rates include the Democratic Republic of Congo (DRC), Burkina Faso, Sudan, India, Cambodia and Djibouti.

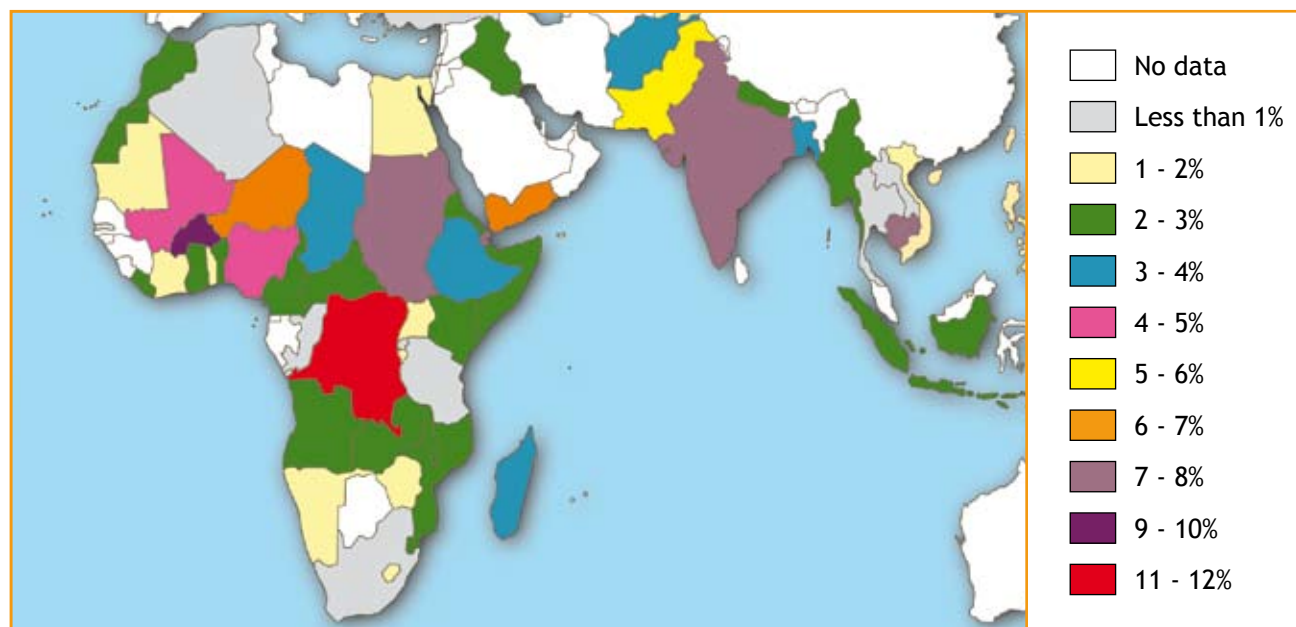


Figure 1: Prevalence (%) of SAM in South-central Asia and sub-Saharan Africa

Figure 2 below provides a glimpse of the estimated number of severely wasted children in the most affected countries in Asia and Africa. By region, south-central Asia has the highest number of children with SAM, with 29 million, or over 52 percent of the de-

veloping country total. In India alone, there are an estimated 8 million severely wasted children, while Bangladesh and Ethiopia have up to 1 million each. Between 1 and 1.5 million severely wasted children are found in Nigeria, DRC and Pakistan.

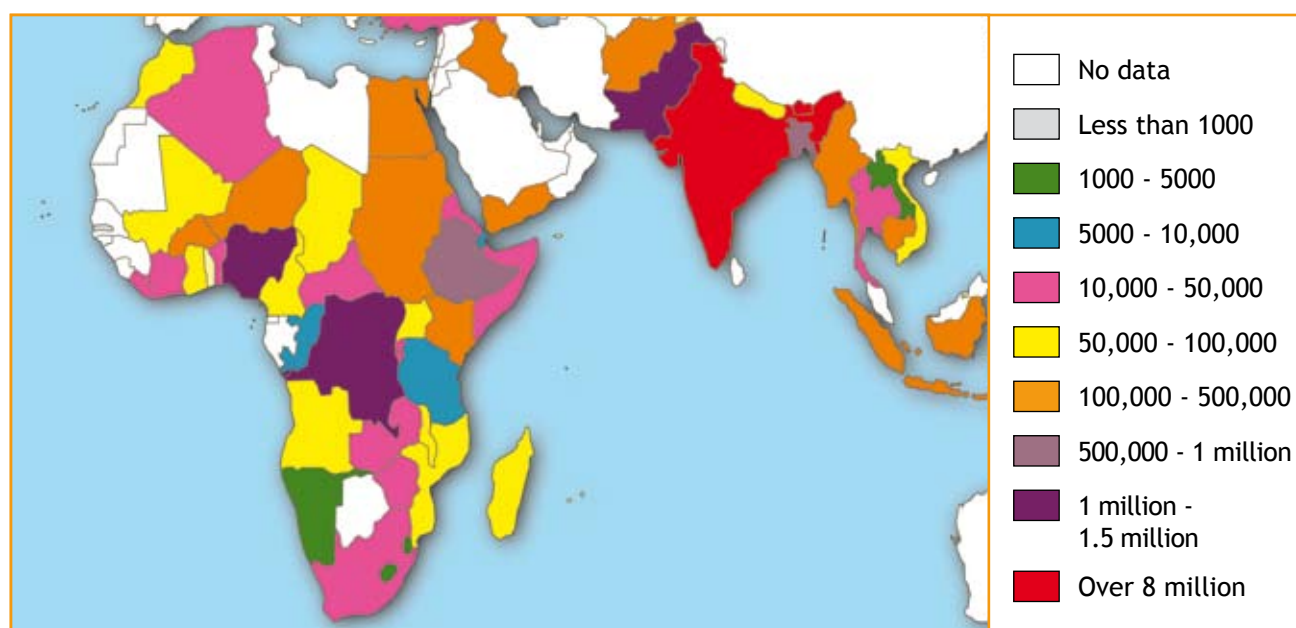


Figure 2: Prevalence (n) of SAM in South-central Asia and sub-Saharan Africa

“Malnutrition kills: every minute up to 7 children die from acute malnutrition and related illnesses.”

Malnutrition is directly implicated in between 35 percent (Black et al, 2008), and 56 percent (Pellétier et al, 1994; 1995) of all deaths among children below the age of 5 each year.

Malnutrition can kill directly. More commonly, however, it weakens the immune system, increasing the chances of death from infectious diseases, particularly diarrhoea, pneumonia, malaria, HIV/AIDS and measles. Over half of all child deaths from diarrhoea (61 percent), malaria (57 percent) and pneumonia (52 percent) are due to the presence of undernutrition. Overall, WHO estimates that 11 percent of the total global disease burden is linked to some form of malnutrition (Black et al., 2008).

Mortality rates linked to severe malnutrition are shockingly high. Children who are severely wasted or underweight are 9 times more likely to die than well-nourished children. In countries facing severe resource deficits, and/or high HIV prevalence rates, the percentage of severely malnourished children dying can reach 30 to 40 percent.^{vii} Maternal and child undernutrition is the underlying cause of 3.5 million deaths (The Lancet b; 2008). Severe acute malnutrition (SAM) contributes to 1 million child deaths every year (UNICEF / WFP / WHO / UNSSCN; 2007).

The risk of death is not limited to children suffering from severe acute malnutrition, for whom the risk of mortality, according to Collins et al (2006) equates

to 73 - 187 per 1000 per year. Mortality rates are also high among moderately malnourished children with estimates of between 30 and 48 deaths per 1000 per year. As the prevalence of moderate malnutrition is greater than that of severe malnutrition, deaths of children as a result of malnutrition can actually be said to be attributable more to moderate, rather than severe malnutrition (Black et al., 2008).

Up to 97 percent or over 18 million of the severely malnourished children lack access to any treatment whatsoever. Of those who do reach government-run clinics or hospitals, nearly 1 in 5 dies because necessary supplies and equipment are desperately lacking. Arriving too late is also a common constraint to successful treatment, especially for children with complications such as poor appetite, infections or illness. When treatment is delayed, even by a matter of hours the chance of dying increases dramatically.

To complicate matters further, the opportunity cost of treating acute malnutrition can be too great for poor families to bear. Such costs, in terms of time and money, of hospital stays or even of transporting a child and his or her mother or caregiver to and from local clinics create enormous economic burdens. As resources are drained to care for one family member, the risks of prolonged bouts of malnutrition, frequent recurrences or more severe malnutrition in other household members increase, resulting in even further lost income-earning opportunities.

vii. ACF programme experience supporting government resourced hospitals in Malawi and Zimbabwe

Box 3: Some effects of malnutrition on health and economic status

In Infants and Children:

- Diminishes the ability to fight infection
- Impairs the immune system and increases the risk of some infections
- Impairs growth
- Increases the chance of infant and young child mortality
- Heightens fatigue and apathy
- Hinders cognitive and mental development
- Reduces learning capacity

In Women:

- Increases the risk of complications during pregnancy
- Increases the risk of spontaneous abortions, stillbirths, impaired foetal brain development and infant deaths
- Increases the risk of death from spontaneous abortion, stress of labour and other delivery complications
- Increases the chance of producing a low birth weight baby
- Reduces work productivity
- Increases the risk for some kinds of infections, including HIV and reproductive tract infections
- Results in additional sick days and lost productivity

Source: Adapted from: Baker J, Martin L, Piwoz E. *A Time to Act: Women are Nutrition and its Consequences for Child Survival and Reproductive Health in Africa*. SARA. December 1996.

Box 4: The Millennium Development Goals

MDG 1 Eradicate extreme poverty and hunger

MDG 2 Achieve universal primary education

MDG 3 Promote gender equality and empower women

MDG 4 Reduce child mortality

MDG 5 Improve maternal health

MDG 6 Combat HIV/AIDS, malaria and other diseases

MDG 7 Ensure environmental sustainability

MDG 8 Develop a Global Partnership for Development

“Nutrition is the foundation for human development - a pre-condition for achieving the Millennium Development Goals.”

The consequences of malnutrition

Malnutrition has dire consequences, causing critical health problems that lead to growth retardation and impaired cognitive development. Without treatment, individuals who are affected by moderate or severe acute malnutrition during the critical stage of life between conception and age 2 may bear the scars for the remainder of their lives (Victora, 2008).

Malnutrition has global repercussions: not only does it harm affected children, but the societies they live in also suffer. Nutrition indicators at age 2 have been shown to be accurate predictors of adult height, educational attainment and other aspects linked to economic productivity (Bhutta et al., 2008). Children who suffer from malnutrition at an early stage of life score lower on tests of cognitive skill, with deficits persisting into adulthood and thus diminishing income-earning potential (World Bank, 2006). Links between malnutrition and increased susceptibility to disease in the long term are well documented (World Bank, 2006), and include a greater likelihood of adult-onset chronic disease for those who have survived malnutrition and experienced rapid weight gain in later childhood.

The *Millennium Development Goals (MDGs)*, adopted in September 2000 by 189 countries, include 8 goals, divided into 18 quantified targets for addressing extreme poverty. All the MDGs and their targets are interrelated, thus requiring a comprehensive approach to tackle the massive issues of poverty, hunger, health, education, gender and sustainable development. Achievement of any of the MDGs could play an important role in ending both acute and chronic undernutrition. Attaining the MDGs highlighted in the box below, however, will also depend on the availability of high-quality nutritional services for mothers and young children in addition to food security and access to a healthy diet.

“An annual investment of US\$9 billion in the Community-based Management of Acute Malnutrition (CMAM) will cover the treatment of all children with severe acute malnutrition.”

Malnutrition negatively affects economic development by reducing productivity and increasing health costs. The *World Bank (WB)* estimates that malnutrition costs between 2 and 3 percent of the *Gross Domestic Product (GDP)* in most affected countries, which in turn has a negative impact on progress towards achieving the MDGs. (World Bank, 2006)

According to UNICEF the global cost of malnutrition to poor economies each year is between US\$20 and US\$30 billion. The cost of basic treatment for SAM is just a fraction of this amount. An estimated US\$80 to US\$160 per child covers the cost of treatment with *Ready-to-Use Therapeutic Food (RUTF)* through *Community-based Management of Acute Malnutrition (CMAM)*.^{viii} Approximately US\$225 per child would allow for in-patient care with supporting

medical treatment and associated costs for children with complications. The total predicted cost for reaching the 19 million severely wasted children is estimated to range from US\$4.5 to US\$9.1 billion.^{ix}

The estimated cost, using the lower figure, of treating all severely wasted children through CMAM in the 10 highest burden countries, as a percentage of each country's GDP, is found in Table 2 below. Only in DRC, where GDP is relatively low, would estimated treatment costs be greater than a mere fraction of the 2 to 3 percent of GDP estimated by the World Bank as the alarming price-tag of untreated malnutrition for national economies. In other words, treating SAM through CMAM appears to be cost-effective, and thus a good investment in economic terms.

Table 2: Estimated cost of CMAM for Severe Acute Malnutrition, as a percentage of GDP in selected high-burden acute malnutrition countries

Country	Cost of Treatment per year (low estimate)	Country GDP (official exchange rate)	Cost of treatment (low estimate) as % of GDP
India	US\$ 2,131,819,200	US\$ 1.21 trillion	0.2%
DRC	US\$ 329,639,520	US\$ 11.59 billion	2.8%
Nigeria	US\$ 278,231,040	US\$ 214.4 billion	0.1%
Pakistan	US\$ 267,425,760	US\$ 167.6 billion	0.2%
Bangladesh	US\$ 158,894,400	US\$ 81.94 billion	0.2%
Ethiopia	US\$ 120,739,680	US\$ 25.66 billion	0.5%
Indonesia	US\$ 109,640,160	US\$ 511.8 billion	0.02%
Sudan	US\$ 94,141,440	US\$ 57.91 billion	0.2%
Burkina Faso	US\$ 59,154,480	US\$ 8.103 billion	0.7%
Yemen	US\$ 57,952,320	US\$ 27.15 billion	0.2%

Source of data: <https://www.cia.gov/library/publications/the-world-factbook/geos/et.html>

viii. Ready to use Therapeutic Foods (RUTF) and Community-based Treatment of Acute Malnutrition (CMAM) are described in detail in Section III.1.3

ix. MSF estimates scale-up of CMAM to address all SAM cases to cost about US\$1.1 billion, including the production of 28,000 tons of RUTF per year, using the lower figure, US\$80/case of SAM. ACF's figure of US\$4.5 - US\$ 9.1 billion is based on prevalence of SAM as well as estimated incidence of >3 episodes of malnutrition/year/child. The World Bank's Scaling up Nutrition: What will it Cost? (World Bank, 2010) estimates US\$11.8 billion/year is needed to address undernutrition, with US\$1.5 billion to be borne by private households, leaving a funding gap of US\$10.3 billion. Scaling up complementary and therapeutic feeding programmes forms the second of a 2- step approach, after capacities are built up in Step 1 to deliver nutrition services. Step 2 involves an estimate of US\$3.6 billion for complementary food to prevent and treat MAM in children under 2 (US\$40-80/child), and US\$2.6 billion to treat SAM (US\$200/episode), and an additional US\$0.1 billion for improved monitoring and evaluation of large-scale programmes and operational research for delivery strategies. Step 1 consists of US\$5.5 billion (US\$1.5 billion for micronutrients and deworming (US\$5/child); US\$2.9 billion for Behaviour Change interventions (US\$7.50/child); US\$0.1 billion for M&E, operational research and technical support.

III. TAKING ACTION: ADDRESSING THE CAUSES OF ACUTE MALNUTRITION

“Acute malnutrition is the result of everyday deprivation and seasonal hardship and is not caused only by one-off crises as is commonly perceived.”

Despite common depictions of malnutrition in the press, most malnourished children do not live in a conflict zone but are instead victims of much more mundane factors in their daily lives. In general, acute malnutrition is caused not by one-off hazards or disasters, unpredictable drought, pests or war, but by the sum of multiple everyday hardships - cyclical market fluctuations, yearly climatic

patterns, periodic entitlement failures such as restricted access to land, or disease patterns - many of which erode the resilience of a population.

The causes of malnutrition are interlinked, as shown in UNICEF’s Conceptual Framework (Figure 3) and range from immediate causes to basic causes (UNICEF, 1990).

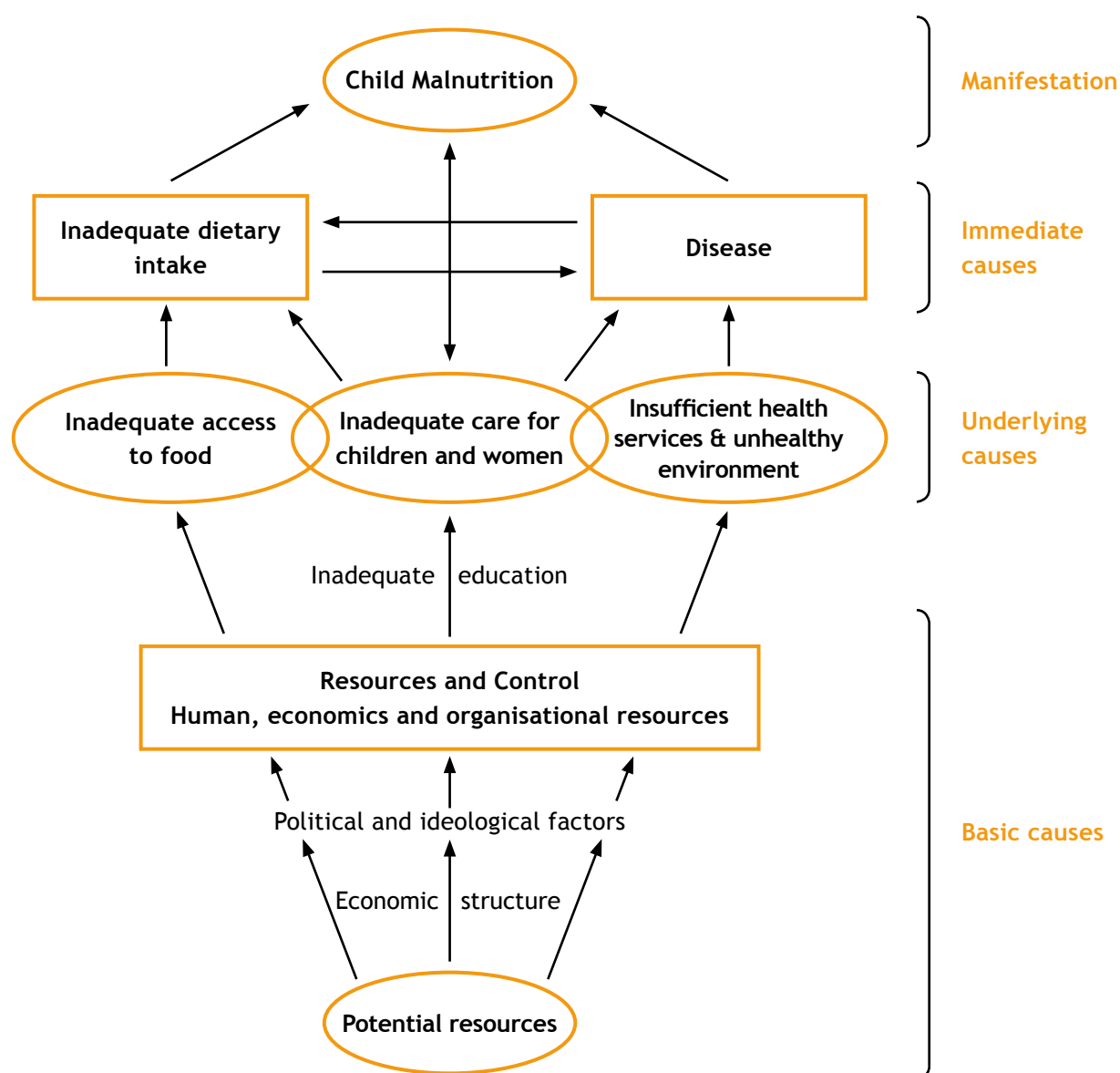


Figure 3: UNICEF’s Conceptual Framework

Situation assessments can examine the multiple causes of malnutrition, and these can then be analysed in order to ‘weight’ and pre-empt as many causes as possible. Once the causes are discerned, action plans can be established and implemented for treatment and prevention. The Triple ‘A’ Approach of Assessment, Analysis and Action (Figure 4) works in tandem with the Conceptual Framework and encourages agency staff, service providers and community members to assess and carry out causal analyses throughout the programming cycle, rather than only at the planning stages (UNICEF, 1990).

Identifying the causes of malnutrition is a prerequisite to determining the most appropriate responses. In one example, the 2008 *Global Hunger Index (GHI)*^x shows that sub-Saharan Africa and South Asia share the highest regional scores for malnutrition and hunger. By using three weighted indicators, the different causes of malnutrition in these regions have been identified. In South Asia, widespread acute malnutrition is related to high levels of underweight stemming from the lower nutritional and educational status of women. In sub-Saharan Africa, however, high malnutrition rates are of-

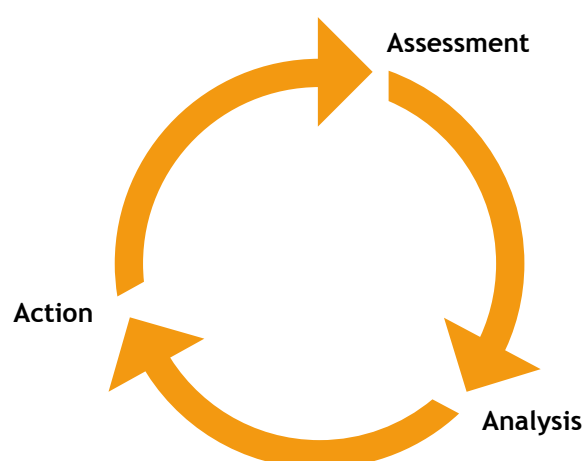


Figure 4: The Triple A Approach to Causal Analysis: Assessment, Analysis, Action (UNICEF 1997)

ten the outcomes of high child mortality and morbidity, and the low proportion of the population able to meet their energy needs (Von Grebmer, 2008). Determining the causes of malnutrition can help to determine the most appropriate interventions in each region, zone, community or household.



x. The Global Hunger Index (GHI) is a combination of three equally weighted indicators used to measure hunger and malnutrition: 1) The proportion of undernourished as a percentage of the population; 2) The prevalence of underweight in children under 5, and 3) The mortality rate of children under 5. The GHI then rates countries on a 100 point scale, with zero being the best score (no hunger) and 100 indicating the highest incidence of hunger. Values from 5 to 9.9 reflect moderate hunger; from 10 to 19.9, a serious problem and from 20 to 29.9 a cause for alarm. Countries with values exceeding 30 are categorised as ‘extremely alarming.’ The 2008 GHI, which uses actual figures up to 2006, identifies an incredible 33 countries with alarming or extremely alarming levels of malnutrition.

ACF's adaptation of the Conceptual Framework (Figure 5) outlines the various immediate, underlying or basic conditions required for adequate nutritional

status and well-being. The Framework establishes the basis for a multi-sectoral, integrated approach to achieving good nutrition and well-being.

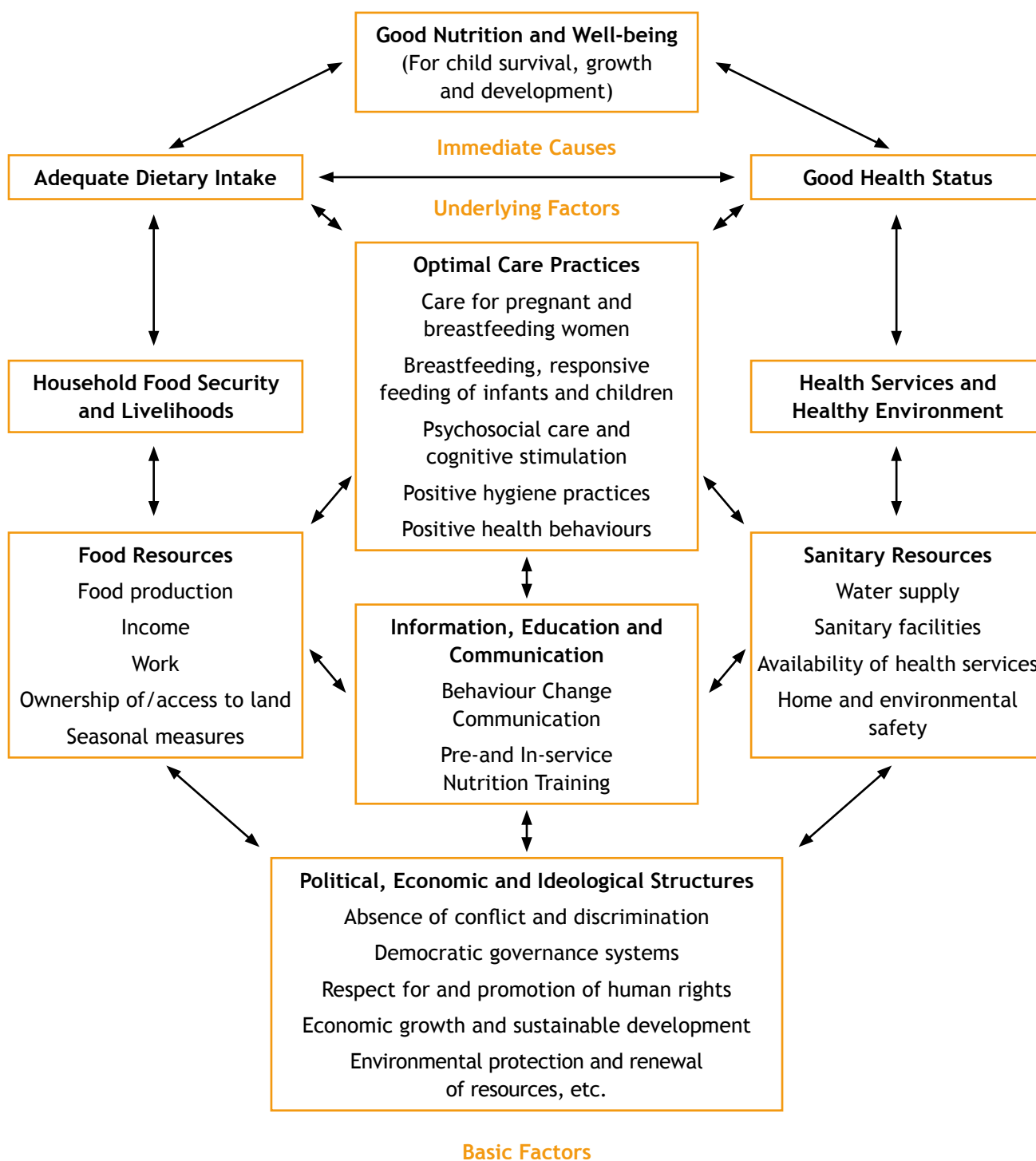


Figure 5: ACF Conceptual Framework for Nutrition^{xi}

xi. Adapted from UNICEF Conceptual Framework (1990) and ACF Framework of Causality (2004).

“Scaling up interventions to treat and prevent acute malnutrition must be at the forefront of responses to hunger (MDG1) and child mortality (MDG4).”

III.1 TAKING ACTION: DIAGNOSING, TREATING AND PREVENTING ACUTE MALNUTRITION

Taking Action: ACF’s Strategic Approach to Addressing Acute Malnutrition

Overall, progress in reducing malnutrition has been dismally insufficient, as shown in the current status of the MDGs. Despite expenditures of billions of dollars on food security interventions every year and continuing economic and agricultural growth in many of the world’s poorest countries, hundreds of millions of children continue to suffer from some form of malnutrition. The fight against hunger has been dominated by various forms of food security assistance such as agricultural investments, cash transfers, and interventions to improve livelihoods. While these interventions are critical, and should be expanded to reach all in need, they will not succeed in eliminating malnutrition, particularly severe wasting, on their own. In addition, a variety of nutrition and nutrition-supportive interventions, implemented at scale, are needed.

The ultimate aim of efforts to end hunger and acute malnutrition must be to save lives and promote optimal growth and development by preventing malnutrition-related morbidity. Interventions that directly diagnose and treat child and maternal malnutrition must therefore be at the forefront of the fight against hunger. Action for nutrition is needed now, to identify and reach women and children who are malnourished, and to treat them before it is too late (Standing Committee on Nutrition, 2008).

ACF currently implements programmes in over 40 countries to address acute malnutrition, in partnership with an array of institutions, organisations and individuals - including affected populations, local service providers from a variety of sectors, national governments and international agencies. ACF’s ultimate goal is to identify and address the causes of malnutrition, *while ensuring that children and other individuals suffering from malnutrition are identified and treated promptly and effectively*. Central to ACF’s efforts is

its **Strategic Approach to Nutrition Action**, illustrated below in Figure 6, consisting of the diagnosis, treatment and prevention of acute malnutrition, working in a coordinated manner and through partnerships, with adequate human and financial resources.

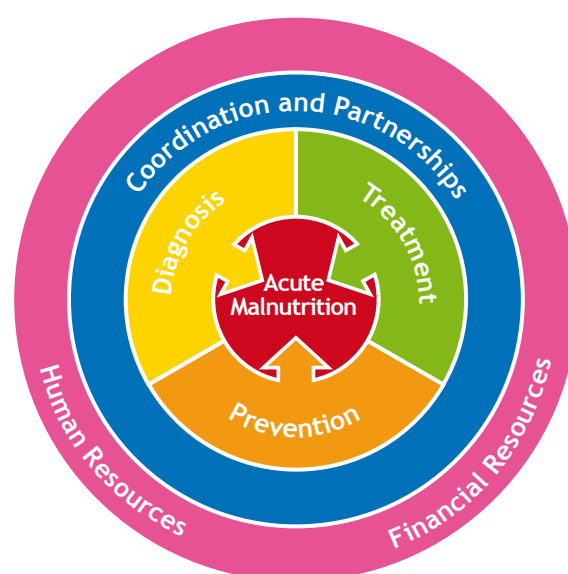


Figure 6: ACF’s Strategic Approach to Nutrition Action

For each of the five components of the Strategic Approach to Nutrition Action, ACF has identified 5 Priority Actions. While there is no set order for carrying them out, the 25 Priority Actions should be based upon an accurate assessment and comprehensive analysis of the causes of malnutrition. First, children’s (and women’s) nutritional status must be assessed and concerns accurately diagnosed. This involves surveying the nutrition situation in a geographic zone, estimating the extent of existing problems, and/or screening individuals to identify specific nutritional concerns. The second step involves planning and implementing high-quality nutrition interventions, ideally through the existing health sector, in order to save lives, or, in the absence of functioning health services, through external agencies. Fi-

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nally, multi-sectoral programmes and services designed to tackle the diverse causes of malnutrition must be initiated or strengthened to prevent malnutrition. Interventions could include measures to improve food security and build livelihoods, ensure adequate WASH, promote optimal care practices for women and children, and/or address a host of other issues. In addition to the diagnosis, treatment and prevention of acute malnutrition, ACF also advocates for coordination and partnerships, supported through adequate human and financial resources.

establishing a standard survey methodology. SMART is designed to improve the quality of nutrition and mortality surveys through greater accuracy.

Box 5: SMART - Standardised Monitoring and Assessment of Relief and Transition

Since 2006, ACF has conducted more than 220 nutrition surveys in over 40 countries, and has been a key player in the development and promotion of the *SMART (Standardised Monitoring and Assessment of Relief and Transition)* methodology. SMART has improved confidence in nutrition survey data on the part of actors in the nutrition and donor communities worldwide. ACF's expertise in SMART, including developing SMART capacity among hundreds of national NGO staff, UN staff, and national Ministry of Health managers and staff, has greatly increased the resources available worldwide to implement the new methodology. SMART's nutrition and mortality indicators will soon be complemented by a food security component, and, in the future, with measurements designed to cover a broad array of causes of acute malnutrition. Eventually, pertinent child development indicators, along with education and *Water, Sanitation and Hygiene (WASH)* indicators will be incorporated into SMART surveys.

III.1.1 Taking Action: Diagnosing Acute Malnutrition

To provide stakeholders with quick and reliable information on the levels and severity of malnutrition as well as risk of malnutrition and its causes, with ACF priorities for programming driven by acute malnutrition rates and risks.

Diagnosing malnutrition and targeting interventions are both essential steps in ensuring that nutrition actions are relevant, timely and reach all in need. Accurate assessments are a key component of diagnosing acute malnutrition. In order to facilitate quick, reliable and comparable assessments for timely decisions, especially important during emergencies, standardised data-collection techniques must be used in a consistent manner. ACF's *Standardised Monitoring and Assessment of Relief and Transition (SMART)* methodology simplifies the collection of reliable anthropometric data by



ACF STRATEGIC APPROACH TO NUTRITION ACTION

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Once the nutrition situation has been assessed, the relevant data can be analysed to determine the magnitude and severity of acute malnutrition within the target population, and to estimate the actual numbers of individuals in need of assistance.

The WHO recommended thresholds for guiding decision-making regarding nutrition interventions during emergencies, presented in Table 3 below (WHO, 2002), recommend action based on MAM and SAM prevalence rates of children under 5. As a result, the thresholds largely ignore the actual number of individuals affected (caseload) and the number of times an individual becomes malnourished (incidence) within a given period.

When malnutrition rates are found to be below the recommended threshold for action of 10 to 14 percent SAM/MAM, interventions may be difficult to justify. In population-dense regions such as urban slums with high morbidity and elevated mortality, however, even lower rates of acute malnutrition may involve hundreds of thousands of children. In some cases, unacceptably high rates of malnutrition that meet recommendations for action fail to merit specific interventions because they have either persisted for a long period, or because they occur 'seasonally', rising every year around the same time. Failure to act, either to treat or to prevent acute malnutrition, regardless of the prevalence level and the duration of the problem, is simply unacceptable. Revised criteria

are therefore needed to ensure adequate responses to moderate rates of acute malnutrition, even in non-crisis contexts such as those existing at any given moment in India, Bangladesh and Niger, for example.

The Sphere^{xii} minimum coverage standards (WHO, 2002) have been developed to encourage relief agencies to reach at least a minimum number of those in need (SPHERE, 2004). Sphere minimum coverage standards for nutrition programmes are >50 percent in rural areas, >70 percent in urban areas and >90 percent in camp situations (SPHERE, 2004). Yet, nutrition interventions often fail to reach even such minimal levels because of the difficulty of attaining high coverage through centre-based feeding programmes and the currently weak system of accountability for achieving results through nutrition treatment.

Managing health and nutrition data from health care and other basic services, and analysing the results of nutrition activities and programmes constitutes a major challenge in most developing countries. Due to the already heavy burden facing health service providers and NGO staff, often under adverse conditions and with few resources, opportunities for using nutrition data are often missed. *Information Communication Technology (ICT)* systems that reduce the workload involved in the collection, processing and analysis of nutrition programme data could vastly improve the quality of that data, which in turn will mean better use of the programme results in decision-making.

Table 3: WHO recommended thresholds for nutrition interventions in emergencies

Targeted Supplementary Feeding / Therapeutic Feeding Programmes	Blanket Supplementary Feeding / Therapeutic Feeding Programmes
Large numbers of malnourished individuals 10-14% MAM/SAM amongst children	SAM/MAM rate of 15% or above
Large numbers of children predicted to become malnourished due to factors such as poor food security or high incidence of disease 5-9% SAM/MAM plus aggravating factors*	SAM/MAM rate of 10-14% plus aggravating factors

*Aggravating factors are defined as absent or inadequate general food rations; crude mortality rate above 1/10,000/day; epidemics of measles or whooping cough and high prevalence of respiratory or diarrhoeal diseases.

Source: WHO 2002

xii. The Sphere Project, launched in 1997 by a group of humanitarian NGOs and the Red Cross and Red Crescent movement, is based on two core beliefs: first, that all possible steps should be taken to alleviate human suffering arising out of calamity and conflict, and second, that those affected by disaster have a right to life with dignity and therefore a right to assistance. Sphere is three things: a handbook, a broad process of collaboration and an expression of commitment to quality and accountability. The Sphere Handbook is currently undergoing a revision process, aimed at updating the qualitative and quantitative indicators and guidance notes, enhancing linkages between sectors, and addressing a variety of issues with the 2004 edition. The new edition is planned to be published in late 2010.

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<p>Tools exist for assessing acute malnutrition status for all members of society. Nutrition assessment protocols and programmes focus mainly on children and infants between 6 months and 5 years of age, and to a lesser extent, pregnant and lactating women due to their increased vulnerability, and because resources are limited. Although malnutrition in adults has been addressed in some contexts, nutritional challenges are rapidly increasing in conjunction with tuberculosis (TB) and HIV and AIDS.</p> <p><i>Low birth weight (LBW)</i> and/or inadequate breastfeeding are potentially serious threats to good nutritional status in newborns and young infants under the age of 6 months, but there has been no consensus as to appropriate diagnosis and treatment protocols for acute malnutrition in this age group. Young infants and children over 5 years, adolescents, especially girls, older adults and any individuals suffering from chronic illness such as HIV and TB, may need systematic screening for malnutrition and other health problems. As nutrition services expand, thousands more health services staff and community members will require training in simple malnutrition screening methods, such as <i>Mid-Upper Arm Circumference (MUAC)</i> and the identification of oedema.</p> <p>While recognising the need for more research on MUAC, ACF nonetheless supports the use of the tool for assessing nutritional status of children between 6 and 59 months, both for admission to and discharge from treatment. ACF also agrees that MUAC, together with weight-for-height indicators, may be appropriate for assessing acute malnutrition in adults, particularly in the context of HIV and as an alternative tool to weighing scales and height boards in remote, difficult to reach geographic zones.</p> <p>Using a MUAC measurement of less than 110 mm as a criterion for admission to therapeutic treatment for children below 5 may exclude a number of severely malnourished children. ACF therefore endorses the use of 115 mm as the cut-off point for admission to treatment.^{xiii}</p>				
				<p>For over 30 years, the United States <i>National Center for Health Statistics (NCHS)</i>/WHO growth reference was used to chart children's growth. Introduced in 2006, the new WHO International Child Growth Standard (ICGS) is based on growth patterns of children around the world who are fed according to current WHO recommendations on infant feeding, including exclusive breastfeeding for the first 6 months of life. The ICGS brings coherence for the first time between the tools used to assess growth and national and international infant feeding guidelines, allowing accurate assessment, measurement and evaluation of breastfeeding and complementary feeding.</p> <p>The ICGS defines higher weight cut-off points for classifying children with SAM than the former NCHS reference. As a result, more children in any given population will be identified as severely malnourished using the ICGS. The ICGS will increase the numbers of severely wasted children identified through screening, and therefore test the capacity of donors, agencies and service providers to meet expanding needs.</p> <p><i>"Measuring MUAC has advantages for screening children to identify malnourished individuals because it does not require expensive equipment; it is simple for community volunteers to do with a little training; the tape can be colour coded so that it is not even necessary to make a measurement; no calculations are required; the measurement is transparent to a community when used to identify children to be given supplementary food; and low MUAC measurements are associated with the risk of dying. MUAC is a simple way to screen large numbers of children and identify those who need supplementary food."</i></p> <p>Source: Professor Andrew Hall (personal communication).</p> <p>Because children with a high risk of death who could benefit from timely treatment may be identified sooner with the ICGS, the period of treatment may be shorter, and they may even have higher rates of recovery.</p>

xiii. One study involving three countries found an increased case load of 80 percent if the cut-off was raised to 115 mm.

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ACF's Priority Actions to Diagnose Malnutrition:

- 1. Scale-up SMART**, using it systematically in emergency, transition and development contexts to provide data for formulating appropriate responses to acute malnutrition.^{xiv} In order to facilitate quick and reliable assessments of acute malnutrition for timely decision-making, in both emergencies and development settings with high risk of malnutrition, SMART must be used consistently together with integrated reviews. If possible, SMART should be implemented within an overall framework of a nutrition surveillance system, allowing for the early detection of deteriorating nutrition, health and livelihood situations at local and national levels.
- 2. Establish a System of Malnutrition Alert Rates (MARs)** to estimate the number of children at risk, even in non-crisis settings. Using MARs would estimate the number of children at risk in each context with the aim of triggering more timely nutrition interventions. Using MARs, appropriate treatment and prevention interventions could also be established in non-emergency settings, addressing situations of persisting, high levels of acute malnutrition that are considered 'normal' simply because they are common, seasonal, and/or last for long periods of time. MARs could be included in existing standards and guidelines such as WHO and Sphere, to institutionalise consideration of the scale of nutrition problems, based on, among other factors, prevalence rates, prevalence, fluctuations in prevalence, population density, numbers of wasted and severely wasted children, death rates, food insecurity and vulnerability to disasters, both within and outside emergency settings.
- 3. Review and Update Guidance for Decision-making on Nutrition Interventions** so that nutrition interventions take into account prevalence rates and the magnitude and incidence of acute malnutrition. Nutrition survey results should be presented in terms of estimated total numbers of malnourished children - and, depending on the situation, other members of the population - including adults, older children and adolescents, and infants under 6 months - in order to determine potential caseloads for programming. The decision-making process for nutrition interventions should also be reviewed to ensure greater accountability in terms of expectations for programme coverage, results and impact, and timeliness.
- 4. Improve Diagnostic Methodologies and Tools for Individual Assessment:** Acutely malnourished individuals must be identified as early as possible, using appropriate tools to ensure rapid entry into the correct treatment programmes. Diagnosis efforts should focus on geographic areas where unacceptably high rates of malnutrition persist, whether seasonal or year round. Minimum acute malnutrition programme coverage standards must be met, and agencies and donors held accountable when this is not the case. Depending on the situation, the targets of nutrition assessments may need to be expanded to include infants, adults and adolescents.
- 5. Continue the Transition to the New WHO International Child Growth Standard (ICGS):** The new standard should be adopted for diagnosis and assessment, as it presents an opportunity to diagnose more malnourished children in a cross-sectional survey, and, if used for growth monitoring, a possibility to identify and treat acute malnutrition earlier.

xiv. SMART (Standardised Monitoring and Assessment of Relief and Transition) is an inter-agency initiative, launched in 2002 by a network of organisations and humanitarian practitioners. SMART provides a standardised method of undertaking surveys to collect information on the two most vital, basic public health indicators to assess the severity of a humanitarian crisis: nutritional status of children under-five and mortality rate of the population.

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III.1.2 Taking Action: Treating Acute Malnutrition

To increase access to nutritional treatment and care, and expand coverage substantially through community-based programmes and through the use of new treatment methods and products.

Malnourished individuals – both children and adults – can be treated as in-patients, in a clinic or hospital, or as out-patients, in their homes. Figure 7 below outlines ACF's 2-pronged strategy for treatment, known as *Community-based Management of Acute Malnutrition or CMAM*.

If acutely malnourished children are taken into a hospital or clinic and it is usually because they have an underlying health problem such as oedema or an infection, or because they have no appetite. The mother or other caregiver must stay with the child while he or she is recovering, a situation that may be particularly difficult if there are other children to care for or if the parent has work to do. Usually known as a *Therapeutic Feeding Programme (TFP)*, in-patient care for severely malnourished children requires specialist nutritionists who are rarely available or may not be sufficiently trained.

If the severely malnourished child does not have any underlying health problem and has a good appetite, the mother can be given sachets of highly nutritious ready-to-eat food known as RUTF to take home (ENN/FANTA, 2008). Treatment through outpatient care is preferable for both the child and the mother. By receiving care at an Outpatient Therapeutic Programme

(OTP), the severely malnourished child can eat RUTF at home, which frees the mother to get on with other tasks. Up to 80 percent of all severely wasted children may be treated in their own communities. Community-based OTPs are less heavily reliant on medical staff and facilities and are therefore less expensive than treating a child in a clinic. RUTF distribution points, where children are monitored for health and nutrition status on a regular basis can be located within communities for easy access. Endorsed by key UN food, nutrition and health agencies, CMAM, including the use of RUTF, has been found to significantly reduce the numbers of severely malnourished children requiring in-patient care (ENN/FANTA, 2008).

Ideally, of course, it would be best if children did not become severely malnourished in the first place. One way to try to achieve this is to provide food rations to a mother to prepare and give to her children who are moderately malnourished, or at high risk of malnutrition. Such food supplements are intended to be eaten in addition to the child's regular diet. Although some Ready-to-Use Foods, referred to simply as RUF, are used, supplementary foods usually consist of a blend of wheat or maize flour with powdered soya beans, fortified with vitamins and minerals, along with vitamin-A fortified vegetable oil to add to the blended flour to increase its energy content. Known as a *Supplementary Feeding Programme (SFP)*, the intervention may target all households in a community, particularly during the lean or hungry season, or households with moderately wasted children.

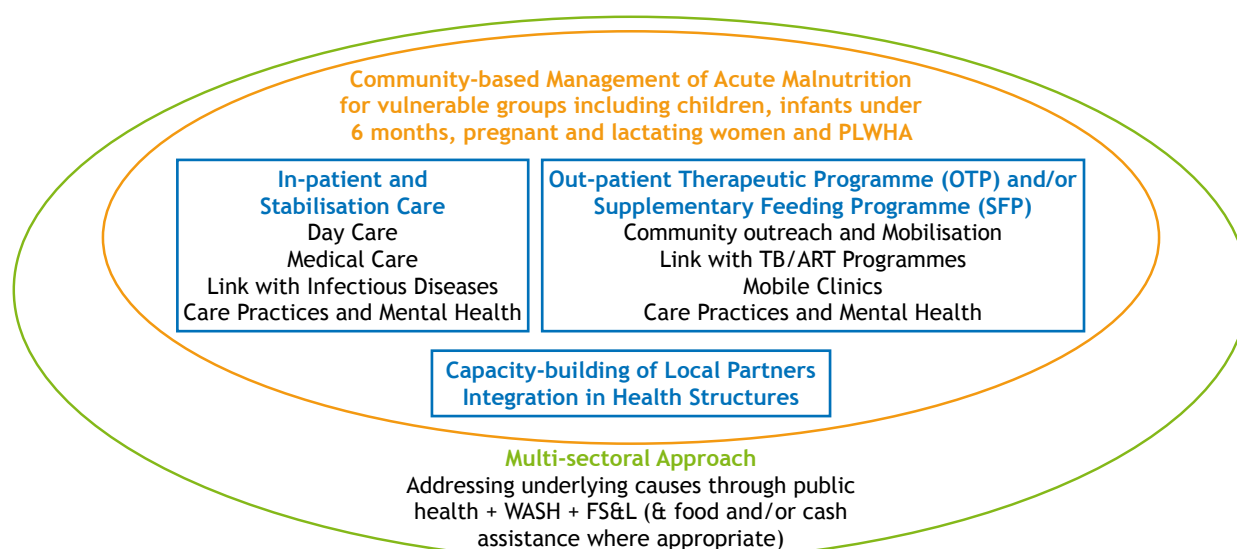


Figure 7: ACF Strategy for Treatment of Acute Malnutrition

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SFPs are generally less expensive per individual than TFPs because the treatment is far less intensive, the food products are cheaper than RUTF, and requirements for staff, facilities and equipment are far lower. The successful treatment of moderate malnutrition through SFPs also depends on external factors, however. The presence or absence of insecurity and unrest, and the availability of nutritious food, healthcare, and care for women and children, WASH and other conditions necessary for nutritional recovery at home are key factors affecting the outcomes of SFP. Seasonal factors may also have a direct impact on nutrition, as SFPs are usually implemented in times of general food shortages, disease outbreaks or humanitarian crises.

An alternative to SFP is to give families cash to buy food. Cash distributions are more successful if there is food available to purchase at a reasonable price, allowing the families to decide for themselves what is best for the family. Cash is also easier to transport than heavy bags of food for the government service, aid agency and the mother.

CMAM offers a potential solution to the constraints of traditional TFP and SFP. The coverage of nutrition interventions can be expanded, and at the same time, patients' opportunity costs reduced by shifting the focus from 'centres' to communities. Large-scale investments to expand CMAM and improve accompanying health services for the acutely malnourished children

who require them could save the lives of millions of children worldwide in a very short period of time. Such efforts, however, require consistent, adequate funding and must also be accompanied by a well-planned approach to strengthen local health services, through systems development, training and supervision.

Box 6: Bringing CMAM to Scale

Since 2004, ACF has treated over 600,000 children suffering from acute malnutrition. A massively scaled-up response is needed, however, to reach the 19 million severely malnourished children in need of urgent help, and an additional 35 million moderately malnourished children who are in danger of deteriorating. Treating a severely malnourished child through CMAM is estimated to cost between US\$80 and US\$160. The total predicted cost for reaching 19 million severely malnourished children thus ranges from US\$4.5 and US\$9.1 billion. While this amount would initially be required on an annual basis, malnutrition rates would eventually fall, as interventions to alleviate poverty bore fruit. With scaled-up resources for nutrition, for example, public health services and facilities would be considerably strengthened, addressing a number of key underlying causes of malnutrition.



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Even within well-functioning *Primary Health Care (PHC)* facilities in developing countries, nutrition interventions are often absent. While PHC programmes are designed to provide both curative and preventative care, many facilities are understaffed and poorly equipped, and focus limited resources on infectious diseases, with an emphasis on medical diagnosis and the delivery of essential medications. Training for health care personnel, both pre- and in-service, in nutrition, malnutrition and micronutrient deficiencies and in analysing their causes and determining solutions, is either insufficient or non-existent. With little nutrition expertise, health care service providers often have difficulty assessing nutritional status and may overlook clinical signs of malnutrition. Equipment for weighing and measuring children may not be available and even when present, staff may not be trained to use them correctly. Health

centres may lack both the resources needed to offer high-quality in-patient care to individuals with complications, and supplies for outpatient treatment and prevention.

The population of severely wasted children under 5 in the 10 highest burden countries^{xv} represents almost 80 percent of all SAM cases. In order to scale up CMAM in these countries- targeting over 15 million severely malnourished children - an investment of between US\$3.6 and US\$7.2 billion would be required (see Table 4 below). The greatest portion of the funding - 75 percent - would cover the costs of outpatient treatment, while the remainder would establish malnutrition treatment through health facilities.^{xvi} A successful scale-up of CMAM in these countries would mean substantial progress in the fight against hunger and acute malnutrition.

Table 4: Cost of Treatment in the 10 Countries with the Highest Number of SAM Children

Country	SAM Prevalence	Number of children with SAM	Estimated cases over a year	Cost of Treatment (low estimate) (US\$)	Cost of Treatment (high estimate) (US\$)
India	7	8,882,580	26,647,740	2,131,819,200	4,263,638,400
DRC	11.9	1,373,498	4,120,494	329,639,520	659,279,040
Nigeria	4.8	1,159,296	3,477,888	278,231,040	556,462,080
Pakistan	5.9	1,114,274	3,342,822	267,425,760	534,851,520
Bangladesh	3.5	662,060	1,986,180	158,894,400	317,788,800
Ethiopia	3.8	503,082	1,509,246	120,739,680	241,479,360
Indonesia	2.1	456,834	1,370,502	109,640,160	219,280,320
Sudan	7.2	392,256	1,176,768	94,141,440	188,282,880
Burkina Faso	9.7	246,477	739,431	59,154,480	118,308,960
Yemen	6.8	241,468	724,404	57,952,320	115,904,640
Total		15,031,825		3,607,638,000	7,215,276,000

xv. Malnutrition based on SAM rates.

xvi. The figures are merely estimates, as it is unknown whether or not taking interventions to scale would reduce or increase costs. The number of welfare payments would most likely increase over time, but other interventions would naturally decrease.

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Box 7: Progress is being made on Scaling up CMAM

The Landscape Analysis on Countries' Readiness to Accelerate Action to Reduce Maternal and Child Undernutrition, currently being undertaken by WHO, is designed to identify gaps, constraints and opportunities for scaling-up nutrition actions in 36 high burden countries. Of these, only ten countries are on track to achieve MDG 1, 17 are progressing but at an insufficient rate, and nine have made virtually no progress at all with an average annual rate of reduction less than 0.5 percent (a rate of 2.6 percent or more is required). Preliminary results of desk reviews from the Landscape Analysis show a strong correlation between being on track to achieve MDG1 and indicators for nutrition outcomes such as low birth weight and breastfeeding and other care practices.

The first steps are underway to initiate the scale-up of CMAM: 38 countries have finalised or drafted integrated action plans for reducing malnutrition, and training materials have been piloted and disseminated in partnership with WHO, ACF, Concern Worldwide and other agencies. In 2008, UNICEF procured 10,000 metric tonnes of RUTF to support national programmes, an increase of 63 percent over 2007. Increasing the production of RUTF threefold, to about 28,000 tonnes per year, is expected to cost about US\$1.1 billion. Producing vast quantities of RUTF at an affordable cost will necessitate global improvements in production and distribution, such as high-quality local production, increasing local demand and helping to improve coverage of treatment and prevention programmes.

ACF's Priority Actions to Treat Acute Malnutrition

- 1. Scale up Community-based Interventions to Address Acute Malnutrition:** CMAM and related health services must be scaled up to meet the needs of all acutely malnourished children through:
 - *Improved nutrition survey methods* aimed at identifying the needs and individual characteristics of hard-to-reach communities (e.g. nomadic and transhumant pastoralists), and quantifying expected caseloads and targets for nutrition interventions
 - *Innovative techniques for mobilising community members* and for ensuring high-quality community-based malnutrition diagnosis, treatment and related health services and prevention activities
 - *Training in growth promotion techniques* including assessment of malnutrition, the causal analysis of acute malnutrition, counselling, and standardised malnutrition treatment guidelines (WHO, 2002)
 - *Technical support in nutrition* and related areas for national structures and services in both emergency and non-emergency contexts
 - *High-quality programme monitoring and technical supervision*
- 2. Strengthen Health Services to support CMAM:** Medical services that support CMAM must be fully resourced in terms of facilities, equipment, supplies and skilled staff. Healthcare service providers must have the capacity to treat acutely malnourished individuals who have complications such as insufficient appetite or medical conditions requiring close supervision and treatment. The standard of specialised care and treatment must be high enough to ensure that malnourished children who suffer from potentially life-threatening illnesses are not put at greater risk of morbidity and mortality when they enter treatment facilities.

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3. **Integrate Nutrition into Healthcare Infrastructure and Services:** An *essential health and nutrition* ‘care package’, comprising a set of high-quality services for promoting adequate nutrition and well-being should be offered at health facilities in accordance with a national health and nutrition policy. The package could vary, depending on the type and location of health facilities. *Maternal and Child Health (MCH)* clinics and other PHC facilities could offer opportunities to provide advice and education to families on care practices, including infant and young child feeding, growth promotion and treatment of simple infections such as diarrhoea, malaria and respiratory infections. Periodic, high-quality growth promotion sessions offered either through clinics or through communities can provide a means to assess and monitor health and nutritional status; to identify malnutrition as early as possible; to determine, together with caregivers and the community, possible causes of acute malnutrition; to provide timely home- and community-based treatment; and to refer complicated cases to in-patient health-care facilities.
4. **Integrate Acute Malnutrition Treatment with HIV and AIDS, TB and Malaria Programmes:** Combined, the three diseases - HIV and AIDS, TB and malaria - account for approximately 6 million deaths per year (Lawson, 2005). Over half of all deaths due to pneumonia (52 percent), malaria (57 percent), and diarrhea (61 percent) can be attributed to malnutrition (Morris, 2003). The diagnosis, treatment and prevention of acute malnutrition should therefore take this into account. The areas of intervention include WASH, PHC services, such as MCH clinics, immunisation programmes and essential drugs programmes, including malaria prophylaxis and treatment, *Anti-Retroviral Therapy (ART)* for HIV, and TB treatment, as well as HIV and AIDS and TB counselling, screening and referral.
5. **Treat Acute Malnutrition in Adults, Adolescents and Infants:** National nutrition guidelines and programmes must be developed (or existing ones revised) to identify and meet the nutrition needs of other vulnerable populations besides pre-school children. These include at-risk adults, adolescents and older adults, especially in countries with high HIV and TB prevalence, and infants below 6 months of age, who should be screened systematically, and if necessary, included in acute malnutrition treatment and prevention programmes.



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“Combined with treatment, helping households to achieve food security, access to water, sanitation and hygiene and optimal care will prevent acute malnutrition.”

III.1.3 Taking Action: Preventing Malnutrition

To reduce the risk of malnutrition and incorporate multi-sectoral strategies to prevent all types of undernutrition - acute, chronic and underweight, and vitamin and mineral deficiencies - (through blanket feeding, micronutrient activities, communication on positive maternal and child care practices, training and other forms of capacity-building, and actions to improve food security, public health, hygiene and access to potable water and sanitation).

Insufficient access to food, poor-quality health care infrastructure and services, poor environmental sanitation, inadequate care of children and women (including gender inequities), and the low educational level of caregivers, are all underlying causes of malnutrition. And while food, health and care are essential for nutrition, none of these alone is sufficient. All three must be available for survival, and optimal growth and development.

Food security is achieved through a combination of food availability and an individual's access to it. The UN *Food and Agricultural Organisation (FAO)* defines food security as all people, at all times, having physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life (FAO, 2006). Food security is adversely affected by poor agricultural systems; lack of investment in agriculture; civil strife leading to high numbers of refugees and displaced persons who have lost access to their land; HIV and AIDS and other diseases that leave people too weak to work their land; lack of access to water; lack of land ownership; and a variety of other interrelated problems. Food insecurity can occur at several levels: individual, household, community and population. Food security crises may result from man-made disasters and conflict, natural disasters, and other ongoing adverse conditions, with several factors affecting people simultaneously.

Food security crises are increasingly related to *accessibility to food*, rather than food availability, as de-

pendency upon markets has increased over the last 20 years. Price fluctuations are therefore a critical issue for food security in both urban and rural contexts. The spike in food and fuel prices experienced in 2008, for example, added unprecedented additional pressure on poor households' food security and livelihoods. The after-effects may undermine years of progress on the MDGs as high prices aggravate other causes of malnutrition. Richer countries are currently acquiring farmland in developing countries to ensure their own food supplies - a new phenomenon arising from the recent food price crisis. While such deals may inject much-needed financial resources into agriculture and rural areas in poor developing countries in the short term, they may also have a negative effect on the poor in the long term by using farmland on which they depend (Von Braun, 2009).

The majority of the world's poor work in rural agriculture, and are thus exposed to seasonal cycles of hunger and malnutrition, poverty and disease. Almost 600 million - 7 out of every 10 hungry people in the world - are small farmers or landless farm workers in regions where it is virtually impossible to produce multiple harvests due to climatic, soil and economic constraints. During the months before the annual harvest, when food reserves are often exhausted and market prices increase, many populations are in a state of constant food insecurity (ACF, 2008). Each year, ACF and other nutrition service providers treat hundreds of thousands of malnourished children during these crucial months.^{xvii}

Environmental health is a key factor in disease prevention, and safe water a mandatory component of a healthy diet. Yet, water remains a low priority in public expenditure, with the WASH sector budget totalling less than 1 percent of *Gross National Income (GNI)*. As a result, 1.5 billion people do not have access to potable water, and over 2.5 billion people - including 980 million children - do not have access to basic sanitation facilities. Eighty-four percent of this population lives in rural areas.

xvii. Seasonal hunger is well highlighted in the ACF Hunger Watch publication, 'Seasons of Hunger'.

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Emergency situations related to WASH are likely to increase due to the negative effects of climate change and environmental degradation. Challenges to environmental sustainability have huge implications for developing countries, with climate change posing new and serious threats to global nutrition. About 250 million^{xviii} people per year are affected by natural disasters which leave them food insecure and vulnerable to acute malnutrition (IFRC, 2007). Achievement of MDG 7, with Target 10 aiming to reduce by half the proportion of people without sustainable access to safe drinking water and basic sanitation by 2015, requires providing 110 million people per year with access to sufficient potable water, and 185 million people per year with basic access to sanitation.

Infants, children and other family members subjected to long-term poverty, natural disasters, conflicts and other traumatising events that lead to poor health and nutritional status - including violence in the home - may suffer from psychological disturbances. Trauma- and stress-related disorders can also profoundly diminish the caring capacity of caregivers, resulting in inadequate care for women and children, an underlying cause of malnutrition. On the other hand, ensuring that the duration of one essential care practice - exclusive breastfeed-

ing - extends to six months - can reduce infant mortality by 1.4 million deaths per year by providing a safe, clean and nutritionally perfect food for infants (Black et al., 2008).

Women and girls are more likely to be malnourished than men in most societies (Ransom, 2003), not only due to their role in reproduction but also to their lower social and economic status, and lack of education. Social and cultural factors, including traditional practices and beliefs regarding food, feeding and care, and gender-related differences in workload and resource distribution also contribute to women's and girls' poor nutritional status. About half of all pregnant women are anaemic and over 100 million women in poor countries are underweight, reducing their productivity and making them more vulnerable to illness and premature death. Poor women are often stunted, and therefore at higher risk of complications during childbirth. Each week, 10,000 women die from treatable complications related to pregnancy and birth (Morris, 2003), emphasising the absolute necessity for access to high quality antenatal and postnatal care for all mothers. For babies left without a mother, the chance of becoming acutely malnourished escalates and the likelihood of survival sharply decreases.



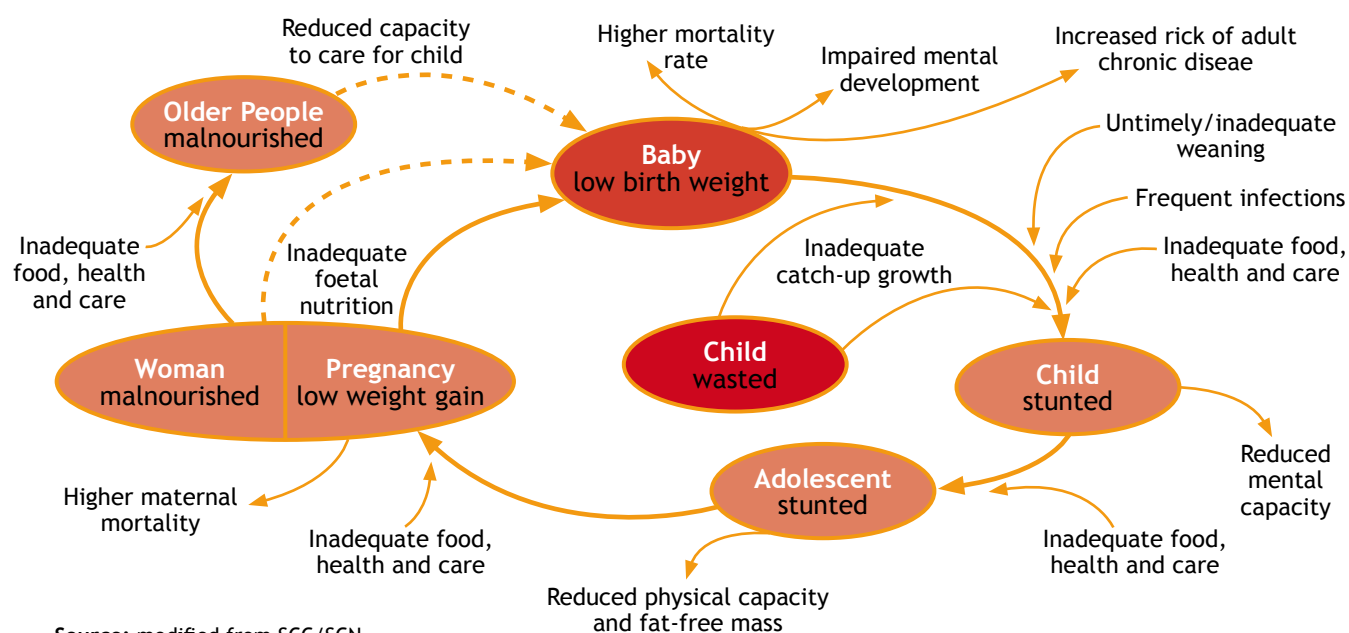
xviii. This figure gives the average of people affected between 1997 and 2006.

ACF STRATEGIC APPROACH TO NUTRITION ACTION

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Girls' nutritional requirements increase during adolescence as a result both of the growth spurt and iron loss during menstruation. Pregnancy during this period creates an additional nutritional burden and places the unborn child at risk of low birth weight and premature death. Stunted or underweight girls are more vulnerable to complications during delivery, such as obstructed labour. Malnourished girls and women are more likely to give birth to

poorly nourished babies, who in turn face greater risk of malnutrition and poor health. They may become acutely malnourished children, and then stunted adolescents, who later gain too little weight during pregnancy, and give birth to babies of inadequate weight. Malnutrition can thus be 'handed down' from one generation to the next, unless treatment and prevention are available at critical periods to halt the cycle of malnutrition.



Source: modified from SCC/SCN

Figure 8: Impact of Hunger and Malnutrition throughout the Life Cycle



Diagnosis	Treatment	Prevention	Coordination and Partnerships	Human and Financial Resources
<p>The educational level of caregivers is related to social and cultural beliefs and practices. Early marriage, teenage pregnancy, female genital mutilation, gender-based violence, and harmful health and infant feeding behaviours, such as discarding colostrum and giving tea and other liquids after birth are examples of cultural practices with potentially lifelong consequences. Education also has a direct impact on earning potential, and the ability to provide a household with sufficient nutritional intake. While a thorough, high-quality education does not translate automatically into improved nutrition and well-being, literacy and access to information concerning preventing malnutrition can be a crucial cornerstone in safeguarding good health and ensuring adequate nutrient intake.</p>				

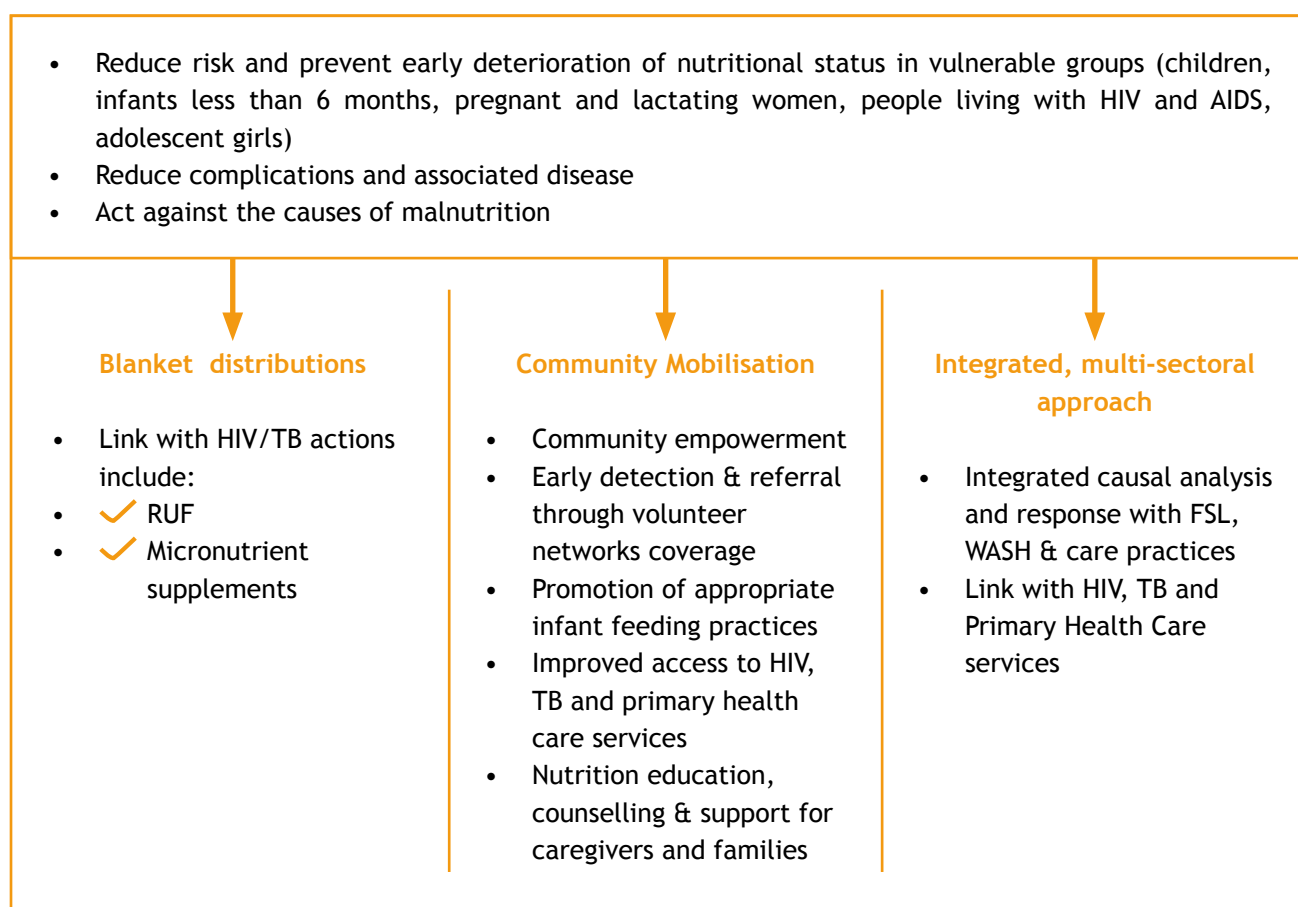


Figure 9: ACF Framework for the Prevention of Malnutrition

Diagnosis	Treatment	Prevention	Coordination and Partnerships	Human and Financial Resources
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ACF's Priority Actions to Prevent Malnutrition:

1. **Integrate Food and Nutrition Security into Poverty Reduction Approaches:** Improving food security through more successful - in terms of production and profit - agricultural development is now being promoted on a large scale to help achieve the MDGs. With 70 percent of the world's poor living in rural areas, rural agricultural development is a primary means to address food insecurity and to prevent malnutrition among the world's poorest people (IFPRI, 2004). Approximately US\$109 billion in agricultural investments is needed to achieve the MDGs, with credit for agricultural investments at local level a key consideration (IFPRI, 2004).
2. **Identify and Treat Acute Malnutrition Early:** In terms of resources required, preventing acute malnutrition is far more effective and efficient than treating it. Community-based programmes to screen for acute malnutrition and refer cases for treatment in its earliest stages may help to prevent deterioration into its severe form. During seasonal peaks of malnutrition, or to avert potential nutritional crises, RUF can be distributed as a preventive measure. Prevention strategies must therefore form an integral part of every acute malnutrition treatment programme, with a focus on CMAM.
3. **Implement Multi-Sectoral Programmes** that address food insecurity, inadequate WASH, poor care practices, and insufficient health and nutrition services: Multi-sectoral programmes for nutrition must forge a link between emergency relief, recovery and rehabilitation, and development. They should be founded on community mobilisation and participation and could include:
 - a. *Water, Sanitation and Hygiene (WASH)*, with activities carried out in all nutrition programmes and particular importance given to health centres, schools and marketplaces.
 - b. *Household Food (and Nutrition) Security and Livelihood (FSL) interventions*, permitting populations
 - c. *Livelihood diversification and social protection activities*, to strengthen households' capacity to resist shocks,^{xix} aimed at ensuring that people pass through periods of food insecurity without hunger and with their livelihoods intact.
 - d. *Promotion of care for children and women*, through nutrition education and *Behaviour Change Communication (BCC)* for caregivers, based on use of locally available and accessible foods. Psychosocial assessment of children and women, and treatment should be integrated into nutrition services.
 - e. *Disaster preparedness and Disaster Risk Reduction (DRR)*, including measures to address the effects of climate change and to protect the environment against potentially harmful policies. At-risk regions should be targeted, to ensure improved and timely responses to natural disasters.
 - f. *Human rights-based programming*, based on the right to food as the right of people to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agricultural systems (Via Campesina, 2007).
 - g. *Practical applied research and innovation*: Appropriate solutions to ever-changing nutrition needs are crucial. By establishing strong links with experts from the scientific research community^{xx} and the private sector, agencies and service providers can benefit from cutting-edge discoveries. Focused, well-planned and professionally implemented operational research in nutrition and health, FSL and WASH can actively contribute to improved interventions. Lessons from field experience can also be studied and used to influence policy, programmes and procedures.

xix. The ACF report, "Seasons of Hunger" explores the critical question of seasonal hunger and proposes concrete solutions for emergency measures to fight malnutrition, emphasising the essential notion of the human right to food, which should be at the heart of all national or international policies for the prevention and the fight against malnutrition.

xx. ACF's Scientific Committee, comprised of academic experts in health, water and agriculture, meets regularly and advises the organisation on current approaches to operational research and the feasibility of proposed studies.

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<p>4. Prevent Micronutrient Deficiencies and Reduce Chronic Malnutrition: Ensuring adequate vitamin and mineral intake is crucial in poor, food insecure and chronically micronutrient deficient populations, especially where health and WASH services are inadequate. Possible prevention strategies include breastfeeding promotion; the use of the <i>Positive Deviance/Hearth (PDH)</i> approach;^{xxi} education for mothers and other caregivers on improved complementary feeding; micronutrient supplementation and/or fortification in vulnerable or known deficient populations; and strong links with food security initiatives. The multi-sectoral approach, combining improved agriculture, with support for adequate livelihoods, access to markets, upgraded WASH and effective communication for improved</p>			<p>behaviours should also promote the consumption of vitamin- and mineral-rich foods.</p>	
			<p>5. Prevent HIV-related Malnutrition: Maintaining adequate nutritional status is crucial for people infected with or affected by HIV. Screening for malnutrition in HIV-positive individuals and screening for HIV and related TB in malnourished individuals must be accompanied by a functioning referral system, to encourage HIV-positive mothers to join <i>prevention of mother to child transmission (PMTCT)</i> programmes for future pregnancies and to receive available care and treatment, including ART. ACF's minimum package for nutrition and HIV in known high risk areas outlines possible actions (Figure 10).</p>	

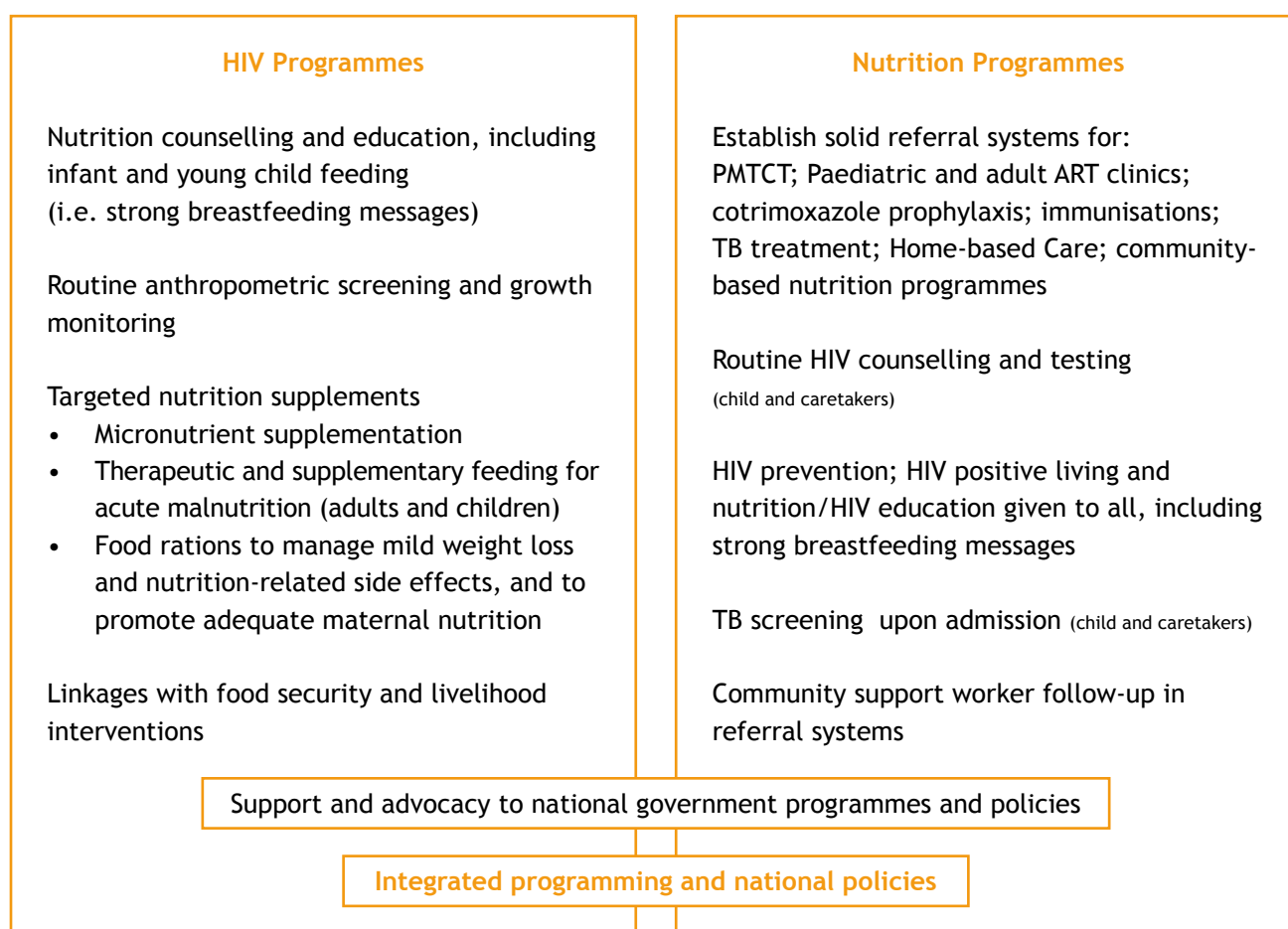


Figure 10: ACF's Nutrition and HIV Minimum Package

xxi. The Positive Deviance/Hearth approach is a home- and community-based nutrition programme for children who are at risk for acute malnutrition in developing countries. Its 'positive deviance' approach is to identify those behaviours practised by the mothers or carers of well-nourished children in poor families and to transfer such positive practices to others in the community with malnourished children. The 'Hearth' or home is the location for the nutrition education and rehabilitation sessions.

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“No single organisation can fulfil all humanitarian needs on its own: partnerships to fight malnutrition and hunger are both desirable and necessary.”

III.2 TAKING ACTION: IMPROVING COORDINATION AND PARTNERSHIPS

A wide variety of political, ideological and economic structures are at the root of acute malnutrition. A combination of research, data collection and situation analyses may offer potential solutions for some fundamental problems, while new technologies may help to resolve other basic causes of malnutrition. The bulk of ACF's (and most nutrition agencies') interventions focus on addressing immediate and underlying causes of the problem. Yet, there is a global recognition that efforts are needed to influence other more fundamental causes. The creation of a coherent, effective architecture for resolving nutrition problems is essential to this task. Partnerships must be developed and/or strengthened at all levels, with the aim of finding appropriate, sustainable solutions for overcoming acute malnutrition.

III.2.1 Improve Coordination and Partnerships:

To strengthen local, national and international partnerships for better coordination of responses to acute malnutrition and related concerns, reinforcing the effectiveness and sustainability of programmes.

At the 35th Annual Meeting of the UN *Standing Committee on Nutrition (SCN)* in March 2008, the phrase “World nutrition is under threat” was used (SCN, 2008). The SCN's statement reflects the unacceptable levels of mortality and loss of productivity attributable to malnutrition in all its forms - both underweight and overweight - which are, in fact, many times that of losses due to the world's most visible pandemic, HIV and AIDS. But, unlike the world's response to AIDS, there is no effective leadership in nutrition, nor one coherent enough to create a global plan, campaign or fund to coordinate efforts to put the eradication of malnutrition at the forefront in developing countries. The 2008 *Lancet* series describes the existing international nutrition system as “fragmented and dysfunctional”, and in dire need of reform.

While a number of donor agencies now include nutrition in their agendas, few prioritise it within their development assistance portfolios. No single agency or group has yet proposed a working blueprint for coordinated action by the international community, nor committed itself to assuring the scale of investment needed to make a significant impact on child malnutrition. Despite the devastating effects of malnutrition, nutrition efforts are largely peripheral, rarely integral, and never paramount in any development agenda.

The lack of a UN body dedicated to addressing malnutrition has sidelined the status of nutrition on the global agenda. Instead of a comprehensive approach, efforts are divided according to agency/organisational mandate, with nutrition divisions, groups or departments of the various entities involved employing one or more nutritionists at headquarters, regional and field levels.

Several global initiatives have attempted to establish frameworks to coordinate the various elements working to improve nutrition (*ECHUI - Ending Child Hunger and Undernutrition Initiative* - conceived in 2006 by UN agencies to address malnutrition and superseded in 2008 by *REACH - Renewed Efforts Against Child Hunger*, a consortium of UN agency heads committed to ending hunger, for example). The UN system has initiated several responses to the current food crisis, such as the *UN System High-Level Task Force (HTLF) for the Global Food Security Crisis*, which is stimulating and coordinating a response among the UN system and international financial institutions (UN, 2008) while the World Bank group's *New Deal on Global Food Policy* has been endorsed by 150 countries (UN, *Comprehensive Framework for Action*, 2009). The *Global Partnership on Food Security and Nutrition (GPFSAN)*, a European initiative spearheaded by France, focuses on food security and funding rather than nutrition. The *EENC (European Emergency Nutrition Coalition)* aims to form a unified coalition on behalf of malnourished populations. And the recently

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published nutrition and food security concept note of the European Commission's international development aid arm seeks to ensure that nutrition is a priority in all development activities.			An assessment and reform of the mandate and function of the UN-SCN is also ongoing, in the hope of reinvigorating leadership and improving the coordination of the nutrition community to create a more collaborative response.	
A recent review of the architecture of the global nutrition "system" commissioned by the Bill and Melinda Gates Foundation (Levine, 2009) offers two recommendations to address the joint problems of incoherence, lack of institutional leaders, and persistent underfunding. First, current and potential international funding agencies could "create a shared set of principles that lay out expectations for the coordination, coherence, and collaboration among institutions that currently do or might receive funding for global nutrition programmes". Through such collaboration, funders could create a strong incentive for UN agencies, the World Bank, privately-funded initiatives and others to work together to fulfill key functions, including norm-setting, advocacy, scientific inquiry, programme and technical support, capacity-building, and implementation at the national level. Secondly, UN agency leaders could raise the agenda of nutrition security within the HLTF's work.			Local partnerships are essential to developing successful, sustainable programmes to address malnutrition. NGOs and community groups can offer international and national planners and practitioners' valuable insights into the causes of hunger and malnutrition, including cultural and social norms and structures, and available resources. Together with government structures involved in nutrition at a national level, local organisations can provide basic services for nutrition at community level, and/or reinforce government services. They can also act as a safety net when government services are inadequate to meet needs and/or resources are insufficient or absent. Through such partnerships nutrition programmes may have a greater chance of being sustainable. ACF's <i>Local Partnership Tool Kit</i> provides guidelines for creating and maintaining partnerships with local organisations.	

Box 8: Putting Acute Malnutrition High on the International Agenda

ACF aims to ensure that addressing hunger and acute malnutrition are priorities both on international and national health and agriculture agendas, in the interest of mother and child well-being and survival. ACF works with the broader international community to ensure that decision-makers respond urgently to the problem by:

- Identifying priority countries/regions/zones for nutrition interventions
- Organising awareness campaigns to include acute malnutrition diagnosis, treatment and prevention as a priority in health and agriculture agendas, policies and protocols
- Promoting effective coordination between major agencies/NGOs/researchers through a consortium of key actors who develop and guide advocacy for international food and nutrition policies and strategies
- Encouraging decision-makers to establish adequate, reliable funding sources for CMAM, and for multi-sectoral actions to address hunger and acute malnutrition
- Advocating for the reduced cost, increased production and wider availability of RUTF and other innovative nutritional products
- Driving a core Acute Malnutrition Advocacy Initiative (AMAI) outlining inputs and objectives both internally and in partnership with others to raise awareness and intensify actions to resolve acute malnutrition.

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ACF's Priority Actions to Improve Coordination and Partnerships:

1. **Enhance Local Partnerships and Community Participation in Decision-making** by involving community members and decentralised government service providers and managers in the planning and implementation of actions to address and prevent acute malnutrition: community participation in all phases of the programme cycle must be prioritised and budgeted for in terms of time and financial resources. Local ownership of nutrition programmes must be cultivated, to identify needs and improve project design, management and evaluation.
2. **Establish National and sub-national Nutrition Coordination mechanisms** at country and region/district levels in high burden countries: national governments should create, together with international organisations, donors and NGOs, and representatives from decentralised levels, a dedicated multi-sectoral nutrition coordination mechanism. Led by a public health nutrition department in the relevant ministry of health, and with links to the partner ministries of trade, agriculture, gender and education. Such bodies should serve as models for an international framework to lead global and/or multi-sectoral efforts to address malnutrition. Priorities of such a coordination body could include the following:
 - a. *Establish a working nutrition budget* and secure required resources for the treatment and prevention of acute malnutrition, with a focus on bringing CMAM up to scale, through direct involvement of the ministry of finance and donors.
 - b. *Develop and maintain formal links between nutrition and health systems*, including management and support for nutrition activities.
 - c. *Create multi-sectoral national nutrition plans of action for eliminating acute malnutrition* (similar to those to combat TB and HIV and AIDS) in the 20 countries with the highest burden of acute malnutrition.
 - d. *Institute and/or update national policy guidelines/protocols* for the diagnosis, treatment and prevention of acute malnutrition.
 - e. *Establish and/or update national policy and guidelines for nutrition and HIV and AIDS care and treatment programmes* in high HIV prevalent countries.^{xxii}
 - f. *Review policies within all national ministries that influence causal factors of malnutrition*, provide technical inputs to ensure that all policies promote improved nutrition, within established national nutrition guidelines and time frames.
 - g. *Implement emergency food assistance (food aid and/or cash-based interventions) for the most vulnerable people* as required in zones of high risk, high malnutrition countries, in close coordination with CMAM and other treatment efforts, in order to save lives.
 - h. *Outline parameters for scaling up investment for agricultural growth* and negotiate with donors to achieve adequate scope.
3. **Institutionalise the Human Rights-based Approach to Addressing Hunger and Malnutrition** in accordance with the *Convention on the Rights of the Child (CRC)* and other internationally recognised human rights instruments, and the SCN working group on Nutrition, Ethics and Human Rights' recommendations on global obligations for the right to food. Promote the application of the human right to adequate food and nutrition through policy development, advocacy and programming (UN-SCN).
4. **Strengthen Global and Regional Partnerships** for a more coordinated international response (architecture) to acute malnutrition. Establish and cultivate coordination between different sectors influencing nutrition, both within organisations at the level of departments or sections, and externally, between government ministries and public and private sectors. Create new mechanisms to ensure the decentralisation of support through regional cooperation, accountability and technical inputs to needy countries for an improved 'international nutrition archi-

xxii. In light of the urgent need to move on the prevention and treatment of HIV-related acute malnutrition, a lack of evidence base should not obstruct the trial of new nutrition approaches.

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texture'. Study well-functioning national nutrition coordination mechanisms, documenting experiences in order to offer global and regional players positive models of effective coordination and cooperation.

5. **Integrate an Advocacy Component into Operations** at all levels, to position acute malnutrition as a public health priority for decisive, timely and responsive policy and action.

III.3 TAKING ACTION: SECURING ADEQUATE HUMAN AND FINANCIAL RESOURCES

In recent years, ACF has begun to integrate CMAM into existing national health systems, as circumstances and contexts have permitted. Although experience so far is limited, two actions appear to be essential for the sustainability of nutrition programmes within health systems: 1) establishing and implementing high-quality national guidelines and protocols; and 2) building the capacity of human resources, including a wide range of staff working in national health systems and aid organisations.

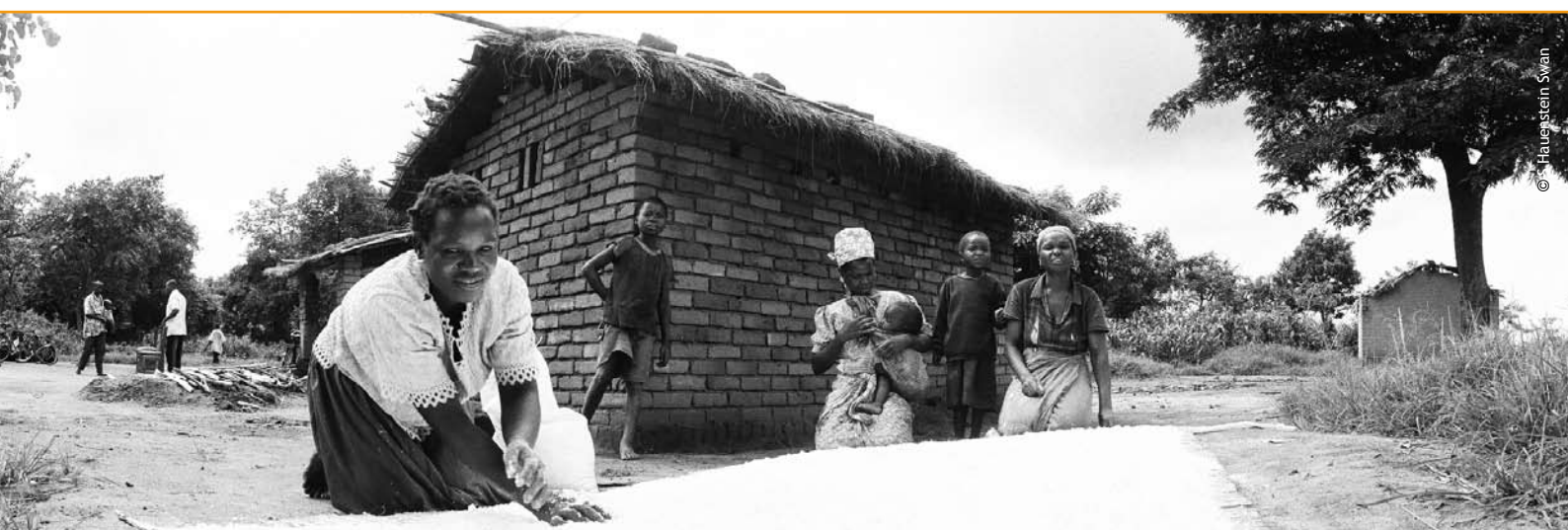
ACF experiences in building such capacity in Asia and Africa^{xxiii} have led to the following conclusions:

- Standardised approaches for developing and implementing national guidelines should be used, to ensure their systematic application at field level, accompanied by a system of technical supervision and support
- Coordination of national and international agencies involved in public health nutrition should be

established early, and nurtured

- Health, environment and agriculture ministries and departments, and other related structures at national and local levels, require capacity-building in nutrition
- Financial and human resources are required for building and maintaining nutrition capacity over time, and should be planned for the medium to long term where malnutrition is a problem.

International guidelines on most nutrition topics, including the treatment of acute malnutrition, nutrition surveys and programme implementation are available. Policies and practices have evolved from a narrow focus on 'protein-energy malnutrition', to a more public health nutrition based, problem-solving approach of identifying and addressing underlying determinants of malnutrition and its consequences. Although lessons have not been applied systematically from one complex emergency to another, considerable experience has



xxiii. Capacity-building has been a key component of ACF activities in Malawi, Zimbabwe, Niger, Tajikistan, Pakistan, Burundi, Afghanistan, Sierra Leone and Liberia with varying success. A similar approach to nutrition programming through building the capacity of national structures is currently planned for Lesotho, Swaziland and in the Central African Republic.

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been gained with each crisis and global understanding of treating malnutrition has improved. The lack of sufficient human capacity to use available tools for treating acute malnutrition, however, continues to impede the implementation of recognised strategies and recommended actions. Thus while the arena for addressing malnutrition broadens, becoming increasingly complex and potentially effective, in overall responses have instead grown more disparate and fragmented.

III.3.1 Securing Adequate Human and Financial Resources to invest in human resources – for improved technical skills and management capacity to implement nutrition programmes, and secure regular, adequate sources of funding to scale up programmes.

According to *Countdown to 2015*,^{xxiv} an independent community of practice that tracks MDG's related to maternal, infant and child survival, undernutrition is an area of little or no progress. Countdown to 2015 confirmed, for example, that the volume of official development assistance to maternal, newborn and child health increased by only 28 percent worldwide in 2005, representing increases of 49 percent in official development assistance to child health and 21 percent in official development assistance to maternal and newborn health. Of the 68 Countdown priority countries, only 38 experienced increases in official development assistance to child health per capita, while in the remainder the amount of aid stayed the same or decreased (UNICEF, 2008).

It is clear that international aid to address undernutrition is grossly inadequate. Financial resources must be increased drastically if tangible progress is to be made on the MDGs. Furthermore, resources for addressing malnutrition must become more predictable, long-term, and targeted to specific nutrition goals (UNICEF, 2008).

The *Countdown* report concludes:

'Within increased efforts to achieve the health-related Millennium Development Goals, improving maternal and child nutrition must be made a priority. Nutrition must be central to both national and sub-national development strategies.'

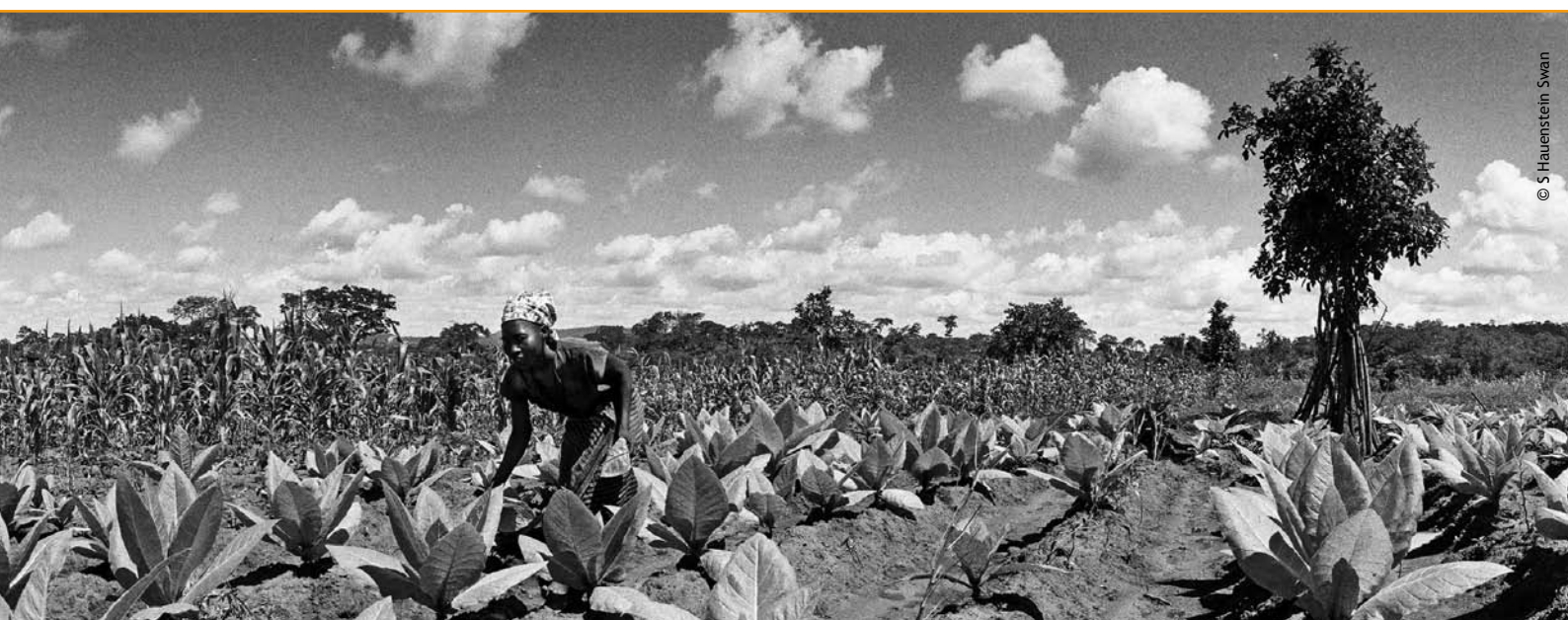
ACF's Priority Actions to Secure Human and Financial Resources:

1. **Build Human Capacity in Nutrition by:**
 - a. *Increasing the availability of practical pre-service training in food and public nutrition.* Efforts are needed to develop more curricula, to create and/or adapt nutrition training manuals and modules for nursing and medical school courses,^{xxv} and to provide academic training in nutrition to students in other related fields including agriculture, education, social work, economics and anthropology.
 - b. *Offering in-service training in nutrition*, through short courses, distance learning and independent study, to government and NGO service providers, and members of civil society, at all levels. National and local human resources must be reinforced, improving the quality of responses to malnutrition, especially during post-emergency situations, when external technical support diminishes.
 - c. *Establishing nutrition education and behaviour change communication (BCC)* both through mass media and individual and group counselling. Health and other professionals, in agriculture, environmental health and education, including early childhood, can be trained through pre- and in-service courses to establish nutrition education and BCC activities, including the prevention of malnutrition and care for children and women.
2. **Secure International Donor Commitment for Long-term Funding of Actions to Eliminate Acute Malnutrition** in recognition of the need for programmes to link relief, rehabilitation and development. Donors should commit funds to establish a new (or revised) international nutrition coordination framework, aimed specifically at ending acute malnutrition through support to national efforts. Nutrition fundings should no longer have to wait until emergency thresholds of acute malnutrition prevalence have been reached, but simply be prompted by the existence of acute malnutrition. Funding should be more flexible and longer-term, giving nutrition agencies the

xxiv. Countdown to 2015 is an independent, informal 'community of practice' that monitors global progress towards MDGs related to maternal, newborn and child survival, with support from UNICEF and WHO.

xxv. ACF has created nutrition modules for nursing and medical schools in Zimbabwe that can serve as models for further pre-service nutrition training.

Diagnosis	Treatment	Prevention	Coordination and Partnerships	Human and Financial Resources
	<p>means to address a range of immediate and underlying causes of acute malnutrition. Longer-term funding would acknowledge that integrated and multi-sectoral approaches require more time for achieving sustainable results and impact than direct interventions alone.</p> <p>3. Press for a Dedicated Nutrition Section/ Unit Within all Major Donor Offices. Rather than continue to address nutrition in a haphazard manner through one of a number of related sectors, donors should establish a section or unit dedicated to nutrition and malnutrition. Such units would facilitate the inclusion of nutrition in all donor emergency and development programmes, and enable donors to address malnutrition as an issue that cuts across sectors (as is the case with HIV and AIDS). Funds should be allocated to these units, and responsibilities clarified with counterpart “nutrition units”, located in priority countries.</p> <p>4. Establish National Nutrition Budgets in high-burden countries to finance the following actions:</p> <p>a. <i>Guarantee free or reasonably priced access to primary health care</i> for pregnant and lactating women and children below 5 years, including growth-promotion activities.</p>	<p>b. <i>Scale-up CMAM</i> as an integral, essential component of national health programmes.</p> <p>c. <i>Meet infrastructure requirements</i> for health and immunisation programmes through conditional cash transfers.</p> <p>d. <i>Create and implement national protocols for the prevention and treatment of acute malnutrition</i> including in-service capacity-building and pre-service training.</p> <p>e. <i>Engage the private sector</i> in initiatives to complement CMAM including the local production of high-quality RUTF at reduced cost and in sufficient quantities.</p> <p>f. <i>Establish national integrated nutrition and food security surveillance systems</i> using tools and indicators established specifically for systematic causal analysis.</p>	<p>5. Establish an Independent International Nutrition Regulatory Body that works to hold recipient governments, bilateral and private donors and multilateral aid agencies accountable for progress in addressing acute malnutrition. Institute a system of regular external programme evaluations and organizational learning, to provide information on progress towards the goal of eradicating acute malnutrition. The international nutrition accountability mechanism would operate in close collaboration with an effective coordination framework for nutrition.</p>	



IV. TAKING ACTION: NUTRITION FOR SURVIVAL, GROWTH & DEVELOPMENT

“With over 30 years of experience in addressing acute malnutrition, ACF is calling for national governments, donors, UN agencies and civil society groups to join forces to create a movement for nutrition for survival, growth and development.”

Despite the enormous challenges they present, the recent global food price and financial crises offer a unique opportunity to cultivate both leadership and partnerships for nutrition. As a result of these global calamities, hunger and malnutrition have finally reached a high-priority status on the agendas of civil society and government debate.

The half-way mark has long passed for achieving the MDGs, and the prospect that many countries will not achieve them by 2015 is an ever-growing reality. The international community is being forced to consider new strategies - including acknowledging the crucial role that nutrition plays in achieving all the MDGs. With CMAM and other innovations for diagnosing, treating and preventing acute malnutrition, grounds for optimism now exist, offering much-needed political attention to the nutritional emergency affecting the world's poorest families.

The international nutrition community has been criticised for its inability both to deliver clear messages and to employ a coordinated, coherent approach to tackling acute malnutrition. The 2008 *Lancet* series bluntly and purposefully outlined the weaknesses of existing solutions, citing the dramatic lack of leadership and accountability for nutrition. It placed the blame squarely on the shoulders of governments and international bodies for the very little progress made in the battle against hunger and malnutrition. Global commitments to nutrition have failed, with funding and actual interventions falling far behind promised levels.

Today, more than at any time in recent history, there is an opportunity to resolve the problem of acute malnutrition. With sufficient will and resources, it is possible to complement existing responses to hunger - in the form of investments in agricultural development, trade reform, and food and/or cash assistance - with a massive scale-up of

proven community-based malnutrition treatment and multi-sectoral interventions focusing on malnutrition. Scaling up CMAM globally to treat acutely malnourished individuals is an urgent priority that necessitates both decisive leadership and constructive coordination between international and national actors.

ACF has assessed and treated millions of acutely malnourished children, women and men over the past three decades, yet recognises that enormous efforts are still needed. Over 55 million acutely malnourished children need urgent solutions. They need to be identified, and their nutritional and health status assessed. They need appropriate treatment and competent care for the chance to survive, to grow and develop. They require multi-sectoral actions to prevent further deterioration or relapses.

Hunger and acute malnutrition are fundamental, global priorities affecting all development efforts. ACF's Strategic Approach to Nutrition Action offers feasible, practical solutions for these complex problems. By taking action jointly for nutrition, the international and national nutrition communities can establish a globally nutrition-aware environment, crucial for creating the momentum and securing the resources needed to prevent and treat all acute malnutrition. **The time for nutrition is now.**

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ANNEX 1: ACRONYMS

ACF	Action Against Hunger (Action Contre la Faim)	MAM	Moderate Acute Malnutrition
AIDS	Acquired Immune Deficiency Syndrome	MDG	Millennium Development Goal
ART	Anti-Retroviral Therapy	MUAC	Mid-Upper Arm Circumference
BCC	Behaviour Change Communication	MSF	Doctors Without Borders (Médecins sans Frontières)
CMAM	Community-based Management of Acute Malnutrition	NCHS	National Center for Health Statistics (USA)
CRC	Convention on the Rights of the Child	NGO	Non-governmental Organisation
DRC	Democratic Republic of Congo	OTP	Outpatient Therapeutic (feeding) Programme
DRR	Disaster Risk Reduction	PDH	Positive Deviance/Hearth approach to malnutrition
EC	European Commission	PLWHA	People Living with HIV and AIDS
ECHUI	Ending Child Hunger and Undernutrition Initiative (UN)	PMTCT	Prevention of mother to child transmission (of HIV and AIDS)
EENC	European Emergency Nutrition Coalition	PHC	Primary Health Care
EHN	Essential Health and Nutrition	REACH	Renewed Efforts Against Child Hunger
ENN	Emergency Nutrition Network	RUF	Ready-to-Use Food
FSL	Food and Nutrition Security and Livelihoods	RUTF	Ready-to-Use Therapeutic Food
FAO	UN Food and Agriculture Organisation	SAM	Severe Acute Malnutrition
GAM	Global Acute Malnutrition	SCN	Standing Committee on Nutrition (UN)
GHI	Global Hunger Index	SFP	Supplementary Feeding Programme
GPFSAN	Global Partnership on Food Security and Nutrition	SMART	Standardised Monitoring and Assessment of Relief and Transition
GDP	Gross Domestic Product	TB	Tuberculosis
GNI	Gross National Income	TFP	Therapeutic Feeding Programme
HIV	Human Immunodeficiency Virus	UN	United Nations
ICT	Information Communication Technology	UNICEF	United Nations Children's Fund
ICGS	International Child Growth Standard	US	United States
IFPRI	International Food Policy Research Institute	WASH	Water, Sanitation and Hygiene
MARs	Malnutrition Alert Rates	WB	World Bank
MCH	Maternal and Child Health	WFP	World Food Programme
		WHO	UN World Health Organisation

ANNEX 2: KEY MESSAGES

Taking Action: Nutrition for Survival, Growth and Development

1. Acute malnutrition is the result of everyday deprivation and seasonal hardship and not caused only by one off crises as is commonly perceived.
2. Today, 55 million children under 5 years of age around the world are acutely malnourished. Over a third of these children, an estimated 19 million, suffer from the most severe form of acute malnutrition. Without treatment these children are at imminent risk of dying, and of never achieving their full growth potential.
3. Only 3% of these children are receiving treatment whereas acute malnutrition can be prevented and treated successfully. Solutions are known, tested and feasible.
4. Malnutrition kills: every minute up to 7 children die from acute malnutrition and related illnesses.
5. Nutrition is the foundation for human development - a pre-condition for achieving the Millennium Development Goals (MDGs).
6. An annual investment of US\$9 billion in the Community-based Management of Acute Malnutrition (CMAM) will cover the treatment of all children with severe acute malnutrition.
7. Scaling up interventions to directly treat and prevent acute malnutrition must be at the forefront of responses to hunger (MDG1) and child mortality (MDG4).
8. Combined with treatment, enabling households to achieve food security, access to water, sanitation, and hygiene, and optimal care will prevent acute malnutrition.
9. No single organisation can fulfil all humanitarian needs on its own: partnerships to fight malnutrition and hunger are both desirable and necessary.
10. With over 30 years of experience in addressing acute malnutrition, ACF is calling for national governments, donors, UN agencies and civil society groups to join forces to create a movement for nutrition for survival, growth and development.



ANNEX 3: ACF'S STRATEGIC APPROACH TO NUTRITION ACTION: 25 PRIORITY ACTIONS TO ACHIEVE NUTRITION FOR SURVIVAL, GROWTH AND DEVELOPMENT

Building on over 30 years of expertise in interventions addressing undernutrition, ACF's new strategic approach to nutrition calls for the urgent implemen-

tation of 25 key actions. These are essential to the world's success in surmounting the ongoing crises of acute malnutrition.

ACF STRATEGIC APPROACH TO NUTRITION ACTION



1. Diagnose Malnutrition:

providing stakeholders with quick and reliable information on the levels and severity of malnutrition as well as risk of malnutrition and its causes.

Action 1: Scale-up *Standardised Monitoring and Assessment of Relief and Transition (SMART)* a new, simplified methodology to diagnose malnutrition. Use the method systematically in emergency, transition and development contexts to provide data for developing

appropriate responses to acute malnutrition.¹

Action 2: Establish a System of Malnutrition Alert Rates (MARs) to estimate the number of children at risk, even in non-crisis settings.

Action 3: Review and update guidance for decision-making on nutrition Interventions so that thresholds for determining nutrition interventions take prevalence rates, as well as the magnitude and incidence of acute malnutrition, into account.

Action 4: Improve diagnostic methodologies and tools for individual assessment. Identify acutely malnourished individuals as early as possible, using appropriate tools, for timely inclusion in appropriate treatment programmes.

Action 5: Continue the transition to the new WHO International Child Growth Standard (ICGS) for accurate diagnosis and assessment of malnutrition, as it presents an opportunity to identify and treat severe acute malnutrition earlier.



1. ACF

2. Treat Acute Malnutrition:

increasing access for malnourished individuals to nutritional treatment and care, and expanding coverage substantially through community-based programmes and through the use of new treatment methods and products, such as Ready-to-Use Therapeutic Foods (RUTF).

Action 6: Scale up community-based interventions to address acute malnutrition, including CMAM and related health services, to meet the needs of all acutely malnourished children through:

- *Improved nutrition survey methods*
- *Innovative techniques for mobilising community members*
- *Training in growth monitoring and promotion techniques*
- *Providing technical support in nutrition and other related areas*
- *High quality programme monitoring and supportive technical supervision*

Action 7: Strengthen health services to support CMAM.

Action 8: Integrate nutrition into healthcare infrastructure and services through an “Essential Health and Nutrition - EHN - care package”.

Action 9: Integrate acute malnutrition treatment with related communicable disease prevention and treatment programmes, such as HIV and AIDS, TB and malaria programme.

Action 10: Treat acute malnutrition in adults, adolescents and infants under six months of age, in addition to young children.

3. Prevent Malnutrition:

reducing the risk of malnutrition and incorporating multi-sectoral strategies of prevention (e.g. through blanket feeding, micronutrient activities, promoting positive maternal and child care practices, training and other forms of capacity-building and carrying out urgent actions in food security, public health, hygiene and access to potable water and sanitation).

Action 11: Integrate food and nutrition security into poverty reduction approaches.

Action 12: Identify and treat acute malnutrition early.

Action 13: Implement Multi-Sectoral Programmes that address food insecurity, inadequate water and sanitation, poor care practices, and insufficient health and nutrition services, through:

- *Household Food (and nutrition) Security and Livelihood (FSL) interventions*
- *Livelihood diversification and social protection activities*
- *Promotion of care for children and women, through nutrition education and behaviour change communication (BCC) and psychosocial assessment and treatment*
- *Disaster preparedness and disaster risk reduction (DRR)*
- *Human-rights-based programming*
- *Practical applied research and innovation*

Action 14: Prevent micronutrient deficiencies and reduce chronic malnutrition.

Action 15: Prevent HIV and AIDS-related malnutrition, including the prevention of mother to child transmission (PMTCT).



Diagnosis	Treatment	Prevention	Coordination and Partnerships	Human and Financial Resources
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4. Improve Coordination and Partnerships:

strengthening local, national and international partnerships for better coordination of responses to acute malnutrition and related concerns, thereby reinforcing the effectiveness and sustainability of programmes.

Action 16: Enhance local partnerships and community participation in decision-making.

Action 17: Establish national and sub-national nutrition coordination mechanisms at country and region/district levels in high burden countries, with responsibility for:

- *Establishing a working nutrition budget and securing required resources for the treatment and prevention of acute malnutrition*
- *Developing and maintaining formal links between nutrition and health systems*
- *Creating integrated national Nutrition Plans of Action for eliminating acute malnutrition in the 20 countries with the highest burden of acute malnutrition*
- *Instituting and/or updating national policy guidelines/protocols for the diagnosis, treatment and prevention of acute malnutrition*
- *Establishing and/or updating national policy and guidelines for nutrition and HIV and AIDS*
- *Reviewing policies within all national ministries that influence causal factors of malnutrition*
- *Implementing emergency food assistance (food aid and/or cash-based interventions) for the most vulnerable people*
- *Outlining parameters for scaling up investment for agricultural growth*

Action 18: Institutionalise the human rights-based approach to addressing hunger and malnutrition, in accordance with the Convention on the Rights of the Child (CRC) and other human rights instruments.

Action 19: Strengthen global and regional partnerships for coordinated international response (architecture) to acute malnutrition.

Action 20: Integrate an advocacy component into operations to position acute malnutrition as a public health priority for decisive, timely and responsive policy and action.

5. Secure Adequate Human and Financial Resources:

investing in human resources - for improved technical skills and management capacity to implement nutrition programmes, and securing adequate, reliable, long-term sources of funding to scale up programmes.

Action 21: Build human capacity in nutrition by:

- *Increasing the availability of practical pre-service training in food and public nutrition*
- *Offering in-service training in nutrition*
- *Establishing nutrition education and behaviour change communication through mass media and through individual and group counselling*

Action 22: Secure international donor commitment for long-term funding to address acute malnutrition, to support the nutrition policy environment and a continuum of actions, from emergencies to development.

Action 23: Advocate for a dedicated nutrition section/unit within all major donor offices.

Action 24: Establish national nutrition budgets in high-burden countries to finance:

- *Guarantee free/reasonably priced access to primary health care for all pregnant and lactating women and children below five years*
- *Scale-up CMAM as an integral, essential component of national health programmes*
- *Meet infrastructure requirements for health and immunisation programmes, through conditional cash transfers*
- *Create and implement national protocols for the prevention and treatment of acute malnutrition*
- *Engage the private sector in initiatives to complement CMAM, including local production of high quality ready-to-use therapeutic foods (RUTF), at reduced cost and in sufficient quantities*
- *Establish national integrated nutrition and food security surveillance systems*

Action 25: Establish an independent international Nutrition Regulatory Body to hold recipient governments, bilateral and private donors and multilateral aid agencies accountable for progress in addressing acute malnutrition.



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