



INVESTING IN NUTRITION THE FOUNDATION FOR DEVELOPMENT

AN INVESTMENT FRAMEWORK TO REACH THE GLOBAL NUTRITION TARGETS

Shekar M, Kakietek J, D'Alimonte M, Walters D, Rogers H, Dayton Eberwein J, Soe-Lin S, Hecht R

Every year, malnutrition claims the lives of 3 million children under age five and costs the global economy billions of dollars in lost productivity and health care costs. Yet those losses are almost entirely preventable. A large body of scientific evidence shows that improving nutrition during the critical 1,000 day window from a woman's pregnancy to her child's second birthday has the potential to save lives, help millions of children develop fully and thrive, and deliver greater economic prosperity.^{1, 2, 3, 4, 5, 6}

There is an urgent need for global action on nutrition. In 2012, the 194 member states of the World Health

Assembly (WHA) endorsed the first-ever global targets to improve nutrition focusing on six areas: stunting, exclusive breastfeeding, wasting, anemia, low birth weight, and overweight. And while some of the targets were enshrined within Sustainable Development Goal 2, which commits to end malnutrition in all its forms by the year 2030, the world is not on track to achieve any of the six nutrition targets.

Accelerating progress against malnutrition will require investment in both proven nutrition interventions and research to understand how to bring promising solutions to scale in a cost-effective

manner.⁷ To inform the action needed, the World Bank, Results for Development Institute (R4D), and 1,000 Days, with support from the Bill & Melinda Gates Foundation and the Children's Investment Fund Foundation (CIFF) conducted an in-depth costing analysis and developed an investment framework for achieving four of the six global nutrition targets (see Table 1).^a

This brief summarizes the analysis of the costs, impacts, and investments needed to achieve the targets and how governments, donors, the private sector, foundations, and others can come together to finance these at scale.

KEY MESSAGES

- 1 Global action is urgently needed to tackle the pervasive problem of malnutrition.
- 2 Reaching the targets to reduce stunting among children and anemia in women, increase exclusive breastfeeding rates, and mitigate the impact of wasting will require an average annual investment of \$7 billion over the next 10 years. This is in addition to the \$3.9 billion the world currently spends on nutrition annually.
- 3 To catalyze progress toward the global nutrition targets, priority should be given to a set of the most cost-effective actions which can be scaled up immediately. Financing this more limited set of actions will require an additional annual investment of just over \$2 billion for the next 10 years. The majority of this annual investment would come from country governments and donors, \$1.4 billion and \$650 million, respectively, while innovative financing mechanisms and households fund the remaining gap.
- 4 When combined with other health and poverty reduction efforts, this priority investment can yield significant returns: an estimated 2.2 million lives can be saved and there will be 50 million fewer cases of stunting in 2025 compared to in 2015.
- 5 Achieving the targets is within reach if all partners work together to immediately step up in investments in nutrition.

INVESTING IN PROVEN INTERVENTIONS

Data and methods derived from country-level costing and financing work were used to inform the analysis and determine the set of evidence-based interventions needed to meet each target,^{1, 8, 9, 10, 11} while keeping in mind WHO recommendations for the actions needed to achieve the global nutrition targets.¹² For each target, the analysis covered the highest-burden countries and the results were extrapolated to all low- and middle-income countries. A technical advisory group guided the work to ensure all methodology and assumptions were technically sound.^b

The analysis underscores the need to scale-up interventions that directly impact the nutritional status of women and children. Many of the highest-impact interventions are found in the 1,000 day window and several contribute to achieving multiple targets (see Table 3). Investments in nutrition interventions alone are not enough to reach the targets—improvements in water and sanitation, agriculture, women’s health and education, and other areas are also necessary to accelerate progress against malnutrition.

It is estimated that an additional \$7 billion per year over the next ten years is needed to reach the global targets for stunting, anemia in women, and exclusive breastfeeding and to mitigate the impact of wasting. This investment of \$70 billion over the next ten years can yield tremendous returns: 3.7 million child lives saved, at least 65 million fewer stunted children, and 265 million fewer women suffering from anemia as compared to the

2015 baseline (see Figure 1). A detailed breakdown is shown in Table 2.







While the potential returns on this investment are significant,⁴ it is important to note that a few of the interventions identified cannot be brought to scale in a cost-effective manner at this time. Moreover, based on what is currently known about preventing wasting, it was not possible to estimate the costs of achieving the wasting target. Therefore, the analysis included only scaling up the treatment of severe acute malnutrition (SAM) as it is a proven life-saving therapy and can help countries reduce the levels of wasting.

As the global community gears up to address critical implementation challenges and rapidly advance the understanding of how to prevent wasting, the analysis suggests that priority should be given to a set of the most cost-effective interventions, all of which can be scaled up immediately.^c This smaller package requires an annual investment of just over \$2 billion, or approximately \$22 billion over ten years above current baseline spending (see Table 2). Scaling up this set of priority interventions could save about 2.2 million lives and—together with anticipated progress in food availability and diversity, women’s health and education, and investments in water and sanitation—could result in 50 million fewer children stunted in 2025 compared to 2015.



Curt Carnemark, World Bank

TABLE 1: NUTRITION TARGETS AND WHY THEY MATTER

	2025 Target	Why it matters
Stunting	 40% reduction in the number of children under 5 who are stunted	Stunting is the largely irreversible outcome of chronic undernutrition and affects 159 million children under the age of five. ¹³ Stunted children have weaker immune systems, making them more susceptible to death and disease, and diminished cognitive capacity which impacts their ability to learn in school and earn higher incomes later in life. ^{14, 15}
Anemia	 50% reduction of anemia among women of reproductive age	Anemia affects half a billion women of reproductive age worldwide—impairing their health and economic productivity. In pregnant women, anemia can lead to maternal death and can have serious health consequences for infants including stillbirths, prematurity, and low birth weight.
NOT INCLUDED	Low Birth Weight  30% reduction in low birth weight	Low birth weight is a major predictor of prenatal mortality and morbidity, and increases the risk for noncommunicable diseases later in life.
	Overweight  No increase in childhood overweight	Childhood overweight and obesity increase risks of noncommunicable diseases, premature death, and disability in adulthood.
Exclusive breastfeeding	 Increase the rate of exclusive breastfeeding in the first 6 months up to at least 50%	Breastfeeding boosts a child's immune system, protects from diseases, increases intelligence, and is essential for healthy growth. Scaling up of breastfeeding to a near universal level could save an estimated 823,000 lives per year. ²
Wasting	 Reduce and maintain childhood wasting (acute malnutrition) to less than 5%	Severely wasted children are, on average, 11 times more likely to die than their healthy counterparts. Two million children die from wasting every year. ¹⁹

A NEW FINANCING PARTNERSHIP: GLOBAL SOLIDARITY

Currently, investments in nutrition are minimal compared to the scale of the problem. It is estimated that country governments currently spend \$2.9 billion and donors provide just under \$1 billion annually to address stunting reduction, wasting, anemia, and exclusive breastfeeding. This means that on average, countries are spending just 1% of their health budgets on the kind of high-impact nutrition-specific programs that save lives and pay significant dividends down the road. Nutrition-specific spending accounts for less than 1% of Official Development Assistance (ODA), despite the fact that malnutrition contributes to 45% of all deaths of children under age 5.¹⁷

Mobilizing the resources needed to accelerate progress against malnutrition will require that donors, countries, innovative financing mechanisms, businesses, and even consumers themselves act in “global solidarity.” National ownership and domestic financing must be maximized and each partner will need to contribute according to its financing capacity and comparative advantage.

Under the global solidarity investment framework, donor financing is front-loaded in the first five years (2016-2020) in low-income and lower middle-income countries to help catalyze greater domestic investment and scale nutrition interventions quickly. Additional contributions are expected to come from innovative financing mechanisms such as the Power of Nutrition¹⁸ and the Global Financing Facility in support of Every Woman, Every Child as well as from households.¹⁹

In the scenario in which \$70 billion is needed to reach the stunting, anemia, and breastfeeding targets and mitigate the impact of wasting, national governments will need to mobilize an average of \$4 billion more per year, and donors an additional \$2.6 billion annually over the next 10 years. For a more detailed understanding of this financing scenario, see Table 2 and Figure 2.

TABLE 2: ADDITIONAL FINANCING BY YEAR

These per year investments by source are meant to show the scaling up and tapering of investments as appropriate for full scale up to reach the targets, as well as to scale up a package of priority interventions.

Scenario A: Full Scale Up to Reach Targets, (millions, USD)

Source	Total over 10 years	In 2016	In 2021	In 2025
Country governments	\$ 39,676	\$ 707	\$ 4,519	\$ 7,104
Donors	\$ 25,628	\$ 622	\$ 3,940	\$ 2,063
Other Sources **	\$ 4,142	\$ 194	\$ 509	\$ 525
Total	\$ 69,446*			

Scenario B: Scale Up of Priority Interventions, (millions, USD)

Source	Total over 10 years	In 2016	In 2021	In 2025
Country governments	\$ 14,095	\$ 285	\$ 1,527	\$ 2,486
Donors	\$ 6,536	\$ 151	\$ 950	\$ 619
Other Sources **	\$ 1,687	\$ 68	\$ 216	\$ 216
Total	\$ 22,318*			

*Financing of IPTp (antimalarial medicine provided during regular prenatal visits) of \$0.5 billion is covered by other health initiatives, including the President's Malaria Initiative, the Global Fund to Fight AIDS, TB and Malaria, and to some extent national governments.

**Sources include innovative financing mechanisms as well as household contributions to appropriate interventions.



“ THERE IS NOW A SHARED OPPORTUNITY TO SAVE MILLIONS OF LIVES AND UNLOCK HUMAN POTENTIAL. ”

FIGURE 1: MEETING THE TARGETS

MEETING THE TARGETS AND MAXIMIZING IMPACT: ADDITIONAL INVESTMENT NEEDED BY 2025

TOTAL = \$69.9 BILLION OVER 10 YEARS^e

At least
65 million
fewer children
stunted
in 2025 as compared to
the 2015 baseline



105 million
more children
exclusively
breastfed by 2025



Some interventions are
shared among different
targets & those
costs overlap



265 million
fewer women
suffering from
anemia in 2025 as
compared to
2015 baseline



3.7
million child
lives saved

IMPACT



TARGET -

STUNTING

Investment: **\$49.5 billion**

At least **65 million**
fewer children stunted in
2025 as compared to the 2015 baseline



2.8 
million child
lives saved



TARGET -

ANEMIA

Investment: **\$12.9 billion**



265 million fewer
women suffering
from anemia
in 2025 as compared to
2015 baseline

800,000
child lives saved



TARGET -

BREASTFEEDING

Investment: **\$5.7 billion**



105 million
more children
exclusively
breastfed

520,000
child lives saved



TARGET -

WASTING

Investment: **\$9.1 billion**



91 million
children treated
for severe acute
malnutrition (SAM)^d

at least
860,000
child lives saved



THE SHARED OPPORTUNITY

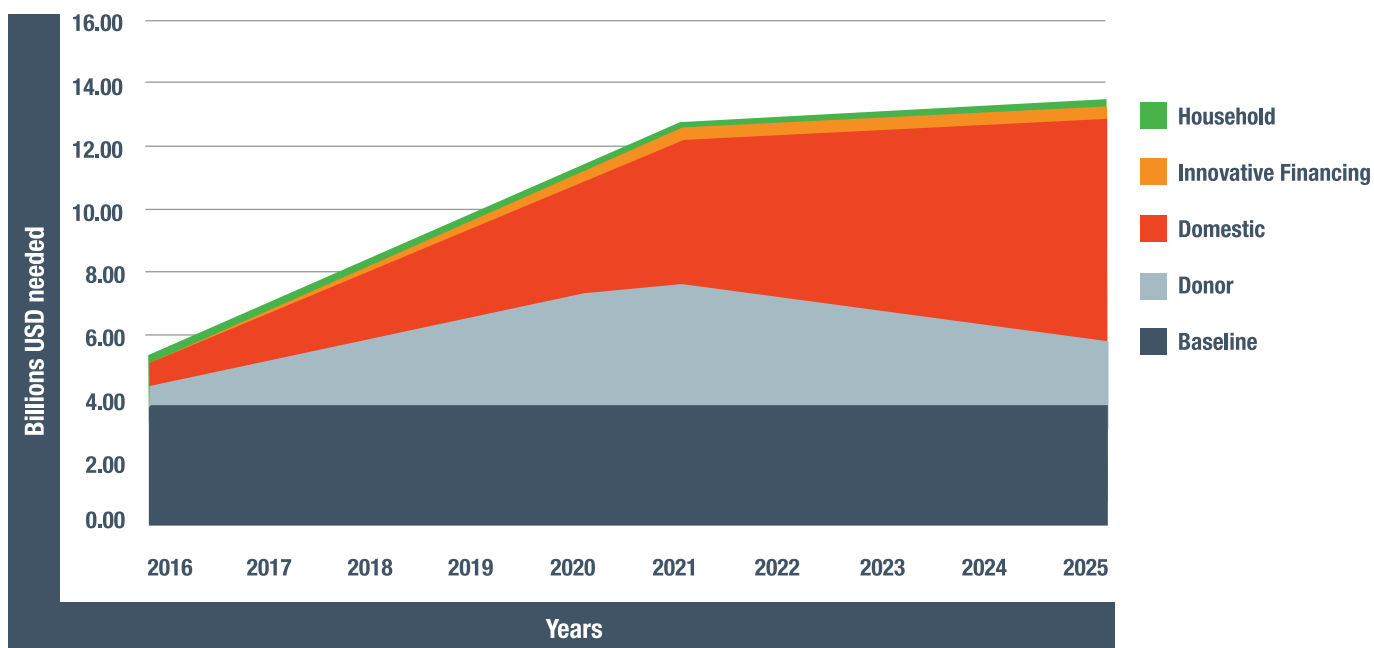
Though decades of underinvestment have led to slow and uneven progress against malnutrition, there is now a shared opportunity to alter this trajectory, save millions of lives and unlock human potential. The financing scenario presented is undoubtedly ambitious. However, these levels of investment are within reach if pursued in conjunction with other critical health and development frameworks and if the effectiveness and efficiency of current and future spending are improved.^f Rapid success is possible as countries like Peru and Senegal have shown. Moreover, the investments in nutrition proposed herein are minimal compared to the trillions spent on fuel subsidies and food subsidies.

Additional funding to scale up what we know works is absolutely critical. However, more work is needed to ensure the cost-effectiveness of existing spending on nutrition, address implementation bottlenecks and knowledge gaps, and strengthen delivery mechanisms for high-impact interventions. A dedicated effort to address the prevention of wasting is also urgently needed. On the financing side, better data and

budget tracking are needed to facilitate prioritization and smart investment decisions as well as to ensure accountability and progress. Finally, more evidence is needed to better understand how actions in areas like water, sanitation and hygiene, food security, agriculture, and women’s empowerment and education can contribute to reductions in malnutrition.

As the world stands at the cusp of the new Sustainable Development Goals with global poverty rates having declined to less than 10% for the first time in history,²⁰ there is an unprecedented opportunity to act decisively on malnutrition. Investing in nutrition today can have an immediate payoff in terms of lives saved and suffering averted as well as significant long-term impacts on the health and development of economies. The second Nutrition for Growth (N4G) Summit provides an important opportunity to bring forward new financial and policy commitments to accelerate progress to meet the global nutrition targets and ensure the bright futures of families and nations.

FIGURE 2: GLOBAL SOLIDARITY SCENARIO FOR FULL SCALE UP



Donor contributions rise rapidly from 0.9% of total ODA in 2015 to 2.8% in 2021, and then taper to 1.8% in 2025. On average for all countries, total government contributions, including what is already being spent, gradually rise from 1.0% of government health expenditures in 2015 to 1.9% in 2021, and further to 2.9% in 2025.* Governments in low-income countries increase national funding to reach 50% of the total by 2025. Lower-middle income countries cover 70% or more of the additional cost by the end of the 10 year period, and upper middle-income countries are expected to cover the full extra cost through their domestic budgets and household contributions.

*Averages are weighted by population.

TABLE 3: TO MEET THE TARGETS

Intervention and target addressed	Description and assumptions
For pregnant women and mothers of infants	
  <p>Micronutrient* supplementation for pregnant women (stunting, anemia)</p>	Includes iron and folic acid supplementation, and at least one additional micronutrient, for approximately 180 days per pregnancy. Delivered as part of antenatal care.
  <p>Promotion of good infant and young child nutrition and hygiene practices (stunting, exclusive breastfeeding)</p>	Individual or group based counseling sessions to promote exclusive breastfeeding (0-5 months of age) and continued breastfeeding, and timely introduction and appropriate quality and quantity of complementary foods for children (6-23 months of age).
 <p>Balanced energy-protein* supplementation (stunting)</p>	Nutritional supplementation during pregnancy for pregnant women living under the poverty line (\$1.25/day). Delivered through existing community, health facility, or social-safety net programs.
  <p>Intermittent preventive treatment for malaria in pregnancy (stunting, anemia)</p>	Two doses of sulfadoxine-pyrimethamine for pregnant women (in malaria endemic areas only) delivered as part of antenatal care.
For infants and young children	
 <p>Vitamin A supplementation for children (stunting)</p>	Two doses per year for children 6-59 months old delivered through mass campaigns.
 <p>Prophylactic zinc* supplementation (stunting)</p>	120 packets of zinc (10mg/day) per child per year for children 6-59 months old. Delivered through community mechanisms similar to MNP supplementation.
 <p>Public provision of complementary foods (stunting)</p>	Supplemental foods for children 6-23 months of age living under the poverty line (\$1.25/day) delivered through community-based nutrition programs or existing public food distribution/social-safety net programs.
 <p>Treatment of severe acute malnutrition (SAM) (severe wasting)</p>	Treatment of SAM using ready to use therapeutic foods (RUTF) in children 6-59 months of age with Weight for Height<-3SD or MUAC<115mm. Outpatient treatment for uncomplicated cases and inpatient treatment (in the stabilization phase) for patients with complications.
For all women of reproductive age	
 <p>Iron and folic acid supplementation for non-pregnant women (anemia)</p>	Weekly supplementation of 60mg iron + 0.4mg folic acid delivered through public provision via schools, community health workers, hospitals, and private distribution for a share of women above the poverty line.
For the general population	
 <p>Staple food fortification (anemia)</p>	Fortification of wheat and maize flour as well as rice with iron and folic acid and distributed through the marketplace.
 <p>Pro-breastfeeding social policies (exclusive breastfeeding)</p>	Policies, legislation, and monitoring and enforcement of policies related to the International Code of Marketing of Breast Milk Substitutes and subsequent resolutions, WHO Ten Steps integration into hospital accreditation, and maternity protection/leave.
 <p>National breastfeeding promotion campaign (exclusive breastfeeding)</p>	Large-scale efforts and use of mass media to promote breastfeeding.

Interventions with an asterisk (*) await updated WHO guidelines.

NOTES

- a Assessment of the WHA nutrition targets on childhood overweight and low birthweight were not included in this analysis; additional research is needed to determine what interventions would support achievement of these targets.
- b The research team is deeply grateful to the following members of the Technical Advisory Group for their contributions to this work: Victor Aguayo, UNICEF; Hugh Bagnall-Oakley, Save the Children UK; Robert Black, Johns Hopkins University; Helen Connolly, American Institutes for Research; Luz Maria De-Regil, Micronutrient Initiative; Kaia Engesveen, World Health Organization; Patrizia Fracassi, Scaling Up Nutrition Movement Secretariat; Robert Greener, Oxford Policy Management; Saul Guerrero, Action Against Hunger UK; Lawrence Haddad, International Food Policy Research Institute (IFPRI); Rebecca Heidkamp, Johns Hopkins University; Sue Horton, University of Waterloo; David Laborde, International Food Policy Research Institute (IFPRI); Ferew Lemma, Ethiopia Ministry of Health; Kedar Mankad, ONE Campaign; Saul Morris, Children's Investment Fund Foundation; Sandra Mutuma, Action Against Hunger UK; Obey Assery-Nkya, Tanzania Office of the Prime Minister; Kelechi Ohiri, Nigeria Ministry of Health; Anne Peniston, USAID; Clara Picanyol, Oxford Policy Management; Ellen Piwoz, Bill & Melinda Gates Foundation; Amanda Pomeroy-Stevens, JSI/SPRING Project; and William Winfrey, Avenir Health.
- c This priority package of interventions for urgent scale up includes: vitamin A supplementation for children, promotion of good infant and young child nutrition and hygiene practices, antenatal micronutrient supplementation, intermittent preventive treatment of malaria for pregnant women, iron and folic acid supplements for adolescent girls, staple food fortification, pro-breastfeeding social policies, use of available mass and social media to promote breastfeeding, and treatment of severe acute malnutrition.
- d Investing in the treatment of wasting alone is not enough to meet the target and a better understanding of interventions that can be brought to scale to prevent wasting is urgently needed. 860,000 child lives saved is a conservative lower bound estimate of the impact.
- e The aggregate cost of \$69.9 billion is not the sum of the costs of the four individual targets because some interventions are shared among different targets and costs for those interventions overlap.
- f In addition, improvements are needed in resource tracking for ODA spent on nutrition so that it is clearer where both nutrition-specific and nutrition-sensitive investments are made.

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