

EXECUTIVE SUMMARY

An Investment Framework for Nutrition

Reaching the Global Targets for Stunting, Anemia, Breastfeeding and Wasting





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As of 2015, 159 million children under the age of five were chronically malnourished or stunted, underscoring a massive global health and economic development challenge (UNICEF, WHO, and World Bank 2015). In 2012—in an effort to rally the international community around improving nutrition—the 176 members of the World Health Assembly endorsed the first-ever global nutrition targets, focusing on six areas: stunting, anemia, low birthweight, childhood overweight, breastfeeding, and wasting. These targets aim to boost investments in cost-effective interventions, spearhead better implementation practices, and catalyze progress toward decreasing malnutrition. Some of the targets (stunting and wasting) are further enshrined within the United Nations' Sustainable Development Goal 2 (SDG 2), which commits to ending malnutrition in all its forms by the year 2030.

These analyses estimate financing needs for the targets for stunting, anemia in women, exclusive breastfeeding for infants, and wasting among young children. The analyses are not able to estimate the financing needs to achieve the wasting target, mainly because of a lack of sufficient evidence on interventions to prevent wasting. Instead, the analyses estimate costs for the scale-up of the treatment of severe wasting. Two of the global nutrition targets—those for low birthweight and for child overweight—are not included in these analyses because there are insufficient data either on the prevalence of the condition (low birthweight) or consensus on effective interventions to reach the goal (child overweight).

Four World Health Assembly Global Targets for Nutrition

- STUNTING**  **REDUCE THE NUMBER** of stunted children under five by 40%
- ANEMIA**  **REDUCE THE NUMBER** of women of reproductive age with anemia by 50%
- EXCLUSIVE BREASTFEEDING**  **INCREASE THE RATE** of exclusive breastfeeding in the first six months up to at least 50%
- WASTING**  **REDUCE AND MAINTAIN** childhood wasting (acute malnutrition) to less than 5%

Source: WHO 2014.

Nutrition Targets: Investment Case

Ending malnutrition is critical for economic and human development. Childhood stunting, an overarching measure of long-term malnutrition, has life-long consequences not just for health, but also for human capital and economic development, prosperity, and equity. Being stunted in early childhood reduces schooling attainment, decreases adult wages, and makes children less likely to escape poverty as adults (Fink et al. 2016;

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Hoddinott et al. 2008; Hoddinott et al. 2011; Martorell et al. 2010). Conversely, reductions in stunting are estimated to potentially increase overall economic productivity, as measured by GDP per capita, by 4 to 11 percent in Africa and Asia (Horton and Steckel 2013). Thus nutrition interventions are consistently identified as one of the most cost-effective development actions (Horton and Hoddinott 2014). Furthermore, investments in early nutrition yield permanent and inalienable benefits.

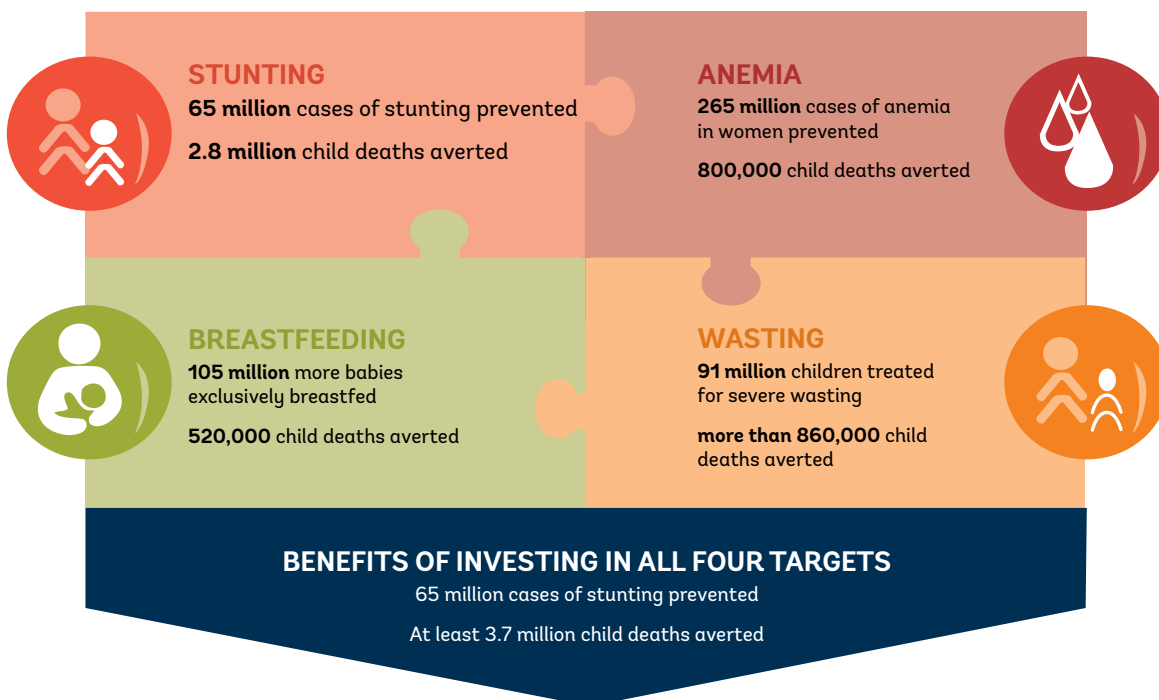
Although the investment case for nutrition is strong, efforts to reach the nutrition SDG targets are constrained by a range of factors including insufficient financing, complexity in terms of implementation (that is, how to bridge disciplines and sectoral borders), and determining the methods and costs (both financial and human resources) involved in monitoring SDG targets. In relation to nutrition’s contribution to this whole-of-society approach to development, these challenges are exacerbated because of the major gaps in knowledge regarding the costs and resources required for scaling up these interventions. Two earlier studies estimated the total costs of scaling up nutrition interventions (Bhutta et al. 2013; Horton et al. 2010). However, those studies estimate the costs of a comprehensive package of evidence-based interventions affecting child undernutrition at large but do not focus on achieving specific outcomes (see chapter 1 in the full report for a discussion of these studies).

Furthermore, neither of these studies provides estimates of the costs of reaching the global nutrition targets, including the SDG targets. In addition, no previous study has systematically linked the costs with the potential for impact and the interventions’ returns on investment, nor assessed the financing shortfall between what is required and what is currently being spent at the global level. Finally, no prior study has presented a comprehensive global analysis of domestic financing from governments and official development assistance (ODA). This report aims to close these knowledge gaps by providing a more comprehensive estimate of costs as well as financing needs, linking them both to expected impacts, and laying out a potential financing framework. An in-depth understanding of current nutrition investments, future needs and their impacts, and ways to mobilize the required funds is included to move the agenda from a political commitment to a policy imperative.

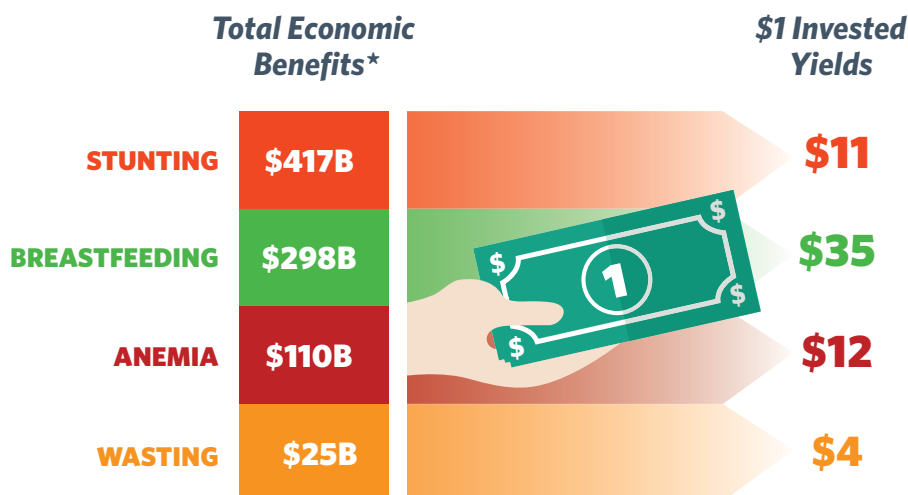
Estimated Financing Needs

The expected effects of the proposed interventions on the prevalence of stunting among children, anemia in women, and rates of exclusive breastfeeding for infants are estimated, along with their impacts on mortality. Benefit-cost analyses are conducted for each intervention,

Benefits of Investing in Global Nutrition Targets



Investments to Meet the Global Nutrition Targets Have Enormous Economic Returns



*Total economic benefits in low- and middle income countries over 10 years for women and over the productive lives of children who benefit from these interventions.

translating the results into benefits in relation to stunting and anemia cases prevented, increased numbers of children breastfed, cases of wasting treated, lives saved, and potential earnings gained over adult working life. Issues of technical and allocative efficiency as they relate to the implementation of scaling-up efforts are also addressed.

This report finds that an additional investment of \$70 billion over 10 years is needed to achieve the global targets for stunting, anemia in women, exclusive breastfeeding and the scaling up of the treatment of severe wasting. The expected impact of this increased investment is enormous: 65 million cases of stunting and 265 million cases of anemia in women would be prevented in 2025 as compared with the 2015 baseline. In addition, at least 91 million more children under five years of age would be treated for severe wasting and 105 million additional babies would be exclusively breastfed during the first six months of life over 10 years. Altogether, investing in interventions to reach these targets would also result in at least 3.7 million child deaths averted.

In an environment of constrained resources, if the world could not afford the \$70 billion needed to achieve the targets but instead could invest in only a subset of interventions, it would have to set priorities. In this context, this report lays out two alternative packages for consideration. These packages would kick-off with scaling-up interventions with the highest returns (that is, those that maximize allocative efficiency) and those that are scalable now (that is, those that maximize technical efficiency),

with the strong caveat that investing in this smaller set of interventions would not achieve the global targets. Financing a “priority package” of interventions will require an additional investment of \$23 billion over next 10 years¹. When combined with other health and poverty reduction efforts, this priority investment approach could still yield significant returns: an estimated 2.2 million lives would be saved and there would be 50 million fewer cases of stunting in 2025 than in 2015. A slightly more ambitious package of investments, called the “catalyzing progress package,” would scale up the priority-package plus a more phased-in expansion of the other interventions to strengthen delivery mechanisms, support research and program implementation. It is assumed that, for the latter set of interventions, during the first five years, emphasis will be placed on establishing global guidelines and on operational research to develop effective delivery platforms, or to develop less expensive products or more cost-effective technologies (such as for rice fortification). This catalyzing progress package will require an additional \$37 billion over the next 10 years, or \$3.7 billion per year. When combined with other health and poverty reduction efforts, this package of interventions could yield significant progress toward the global targets: an estimated 2.6 million lives would be saved and there would be 58 million fewer cases of stunting in 2025 than in 2015.

In terms of financing sources—as with other areas that the SDGs aim to address—a mix of domestic on-budget

¹The priority package includes antenatal micronutrient supplementation, infant and young child nutrition counseling, intermittent presumptive treatment of malaria in pregnancy in malaria-endemic regions, vitamin A supplementation for children, wheat and maize flour fortification, and iron and folic acid supplements for adolescent girls in school.

allocations from country governments combined with official development assistance (ODA), and newly emerging innovative financing mechanisms coupled with household contributions, could finance the remaining gap. This underscores again the extent to which a whole-of-society effort is needed for financing the achievement of the nutrition targets in the context of the broader sustainable development goals; this mix of financing is also in line with other SDG challenges.

These analyses also confirm the high returns on investment that come from investing in nutrition among children and women. Not only do investments in nutrition make one of the best value-for-money development actions, they also lay the groundwork for the success of investments in other sectors.

Achieving the targets is within reach if partners work together to immediately step up in investments in nutrition. Indeed, some countries (Peru, Senegal, and others) have shown that rapid scale-up of nutrition interventions can be achieved and lead to swift declines in stunting rates (see chapter 9 in the report for a discussion of country achievements in reducing malnutrition).

Key Recommendations

1. The world needs \$70 billion over 10 years to invest in high-impact nutrition-specific interventions in order to reach the global targets for stunting, anemia in women, and exclusive breastfeeding for infants and to scale up the treatment of severe wasting among young children.

Although \$7 billion a year may seem to be a large investment, it pales in comparison to the \$500 billion per year (nearly \$1.5 billion/day) that is currently spent on agriculture subsidies (Potter 2014) and the \$550 billion per year (over \$1.5 billion/day) spent on fossil fuel subsidies (International Energy Agency 2014), or \$19 billion per year on HIV-AIDS (UNAIDS 2016).

The nutrition-specific investments presented in this report are expected have large benefits: 65 million cases of stunting and 265 million cases of anemia in women would be prevented in 2025 as compared with the 2015 baseline. In addition, at least 91 million more children would be treated for severe wasting and 105 million additional babies would be exclusively breastfed during the first six months of life over 10 years. Altogether, achieving these targets would avert at least 3.7 million child deaths. And, every dollar invested in this package of interventions would

yield between \$4 and \$35 in economic returns. This is in line with previous studies suggesting returns of \$18 (Hoddinott et al. 2013).

In an environment of constrained resources, this report lays out two alternative investment packages, with the strong caveat that investing in these sets of interventions would not achieve the global targets. A “priority package” of immediately ready to scale interventions would require \$23 billion over the next 10 years. A “catalyzing progress package” would scale up the priority package plus a more phased-in expansion of the other interventions to improve delivery mechanisms and program implementation, requiring an additional \$37 billion over the next 10 years. Further investments would be needed over time to build up to scaling up the full package.

2. Recent experience from several countries suggest that meeting these targets is feasible, although some of the targets—especially those for reducing stunting in children and anemia in women—are ambitious and will require concerted efforts in financing, scale-up, and sustained commitment. On the other hand, the target for exclusive breastfeeding has scope to be much more ambitious.

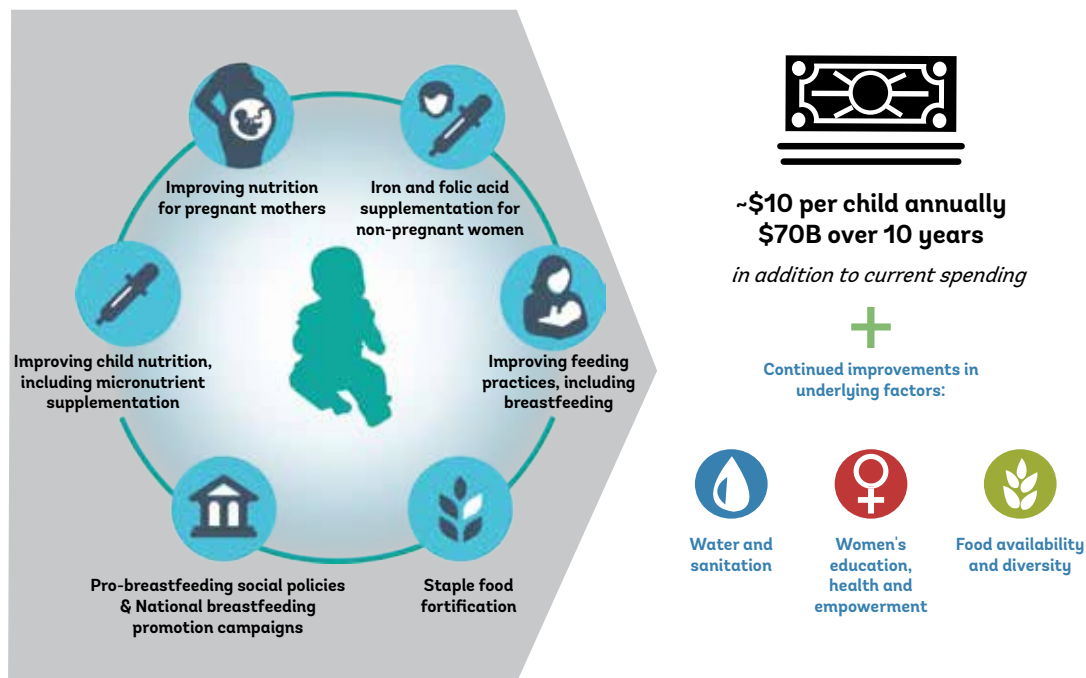
3. Some areas of future research need to be prioritized. These include:

Research on scalable strategies for delivering high-impact interventions is necessary, including how to address bottlenecks to scaling up, for example through results-based budgeting approaches or other ways of incentivizing results. Such research will not only facilitate faster scale-up, but it would also have the potential to increase the technical efficiency and delivery costs for these interventions, thereby reducing the global financing needs.

Another critical area for future research is *the assessment of allocative efficiency*—that is, identifying the optimum funding allocation among different interventions or an allocation that maximizes the impact under a specific budget constraint. The present analyses show cost per outcome, allowing for only limited comparisons of cost-effectiveness among different interventions for the same targets.

Research to improve the technical efficiency of nutrition spending is also urgently needed. This includes identifying new strategies for addressing complex nutritional problems such as stunting and anemia, as well as technologies to help take these solutions to scale more rapidly and at lower cost. Because of the multifactorial nature of anemia, research is underway to clearly determine what

An Affordable Package of Nutrition-Specific Interventions



fraction of the problem can be addressed by nutrition interventions; the estimates presented in this report may need to be revised accordingly once results become available. Additionally, some micronutrient deficiencies are not included here (i.e., iodine deficiencies), because these were not included in the global targets, even though they have significant impacts on morbidity, mortality, and economic productivity.

Strengthening the quality of surveillance data, unit cost data for interventions in different country contexts, and building stronger data collection systems for estimating current investments in nutrition (from both domestic governments and ODA) are also crucial. Further research is needed on the costs of interventions such as maternity protection to support women in the workforce so they can exclusively breastfeed infants for the first six months. In addition, significant resources will be required to build a living database of current investments, including closely monitoring spending and ensuring accountability, and to undertake national-level public expenditure reviews.

A dedicated effort to *understanding which interventions prevent wasting* is urgently needed. It is also essential to learn more about cost-effective strategies for managing moderate acute malnutrition, and whether or not these can contribute toward the prevention of wasting.

More evidence is needed on the costs and impacts of nutrition-sensitive interventions—that is, interventions that improve

nutrition through agriculture, social protection, and water and sanitation sectors, among others. It is evident that stunting, as well as anemia, are multifactorial and can be improved through increasing quality, diversity, and affordability of foods, increasing the control of income by women farmers, and also by reducing exposure to fecal pathogens by improved water, sanitation, and hygiene practices. However, the attributable fraction of the burden that can be addressed by these interventions is unknown. The last five years have seen a proliferation of studies to improve clarity on these issues, as well as on the use of social programs as a platform for reaching the most vulnerable. Future work in this area should take into account such new evidence as studies are published.

Call to Action

As the world stands at the cusp of the new SDGs, with global poverty rates having declined to less than 10 percent for the first time in history (World Bank 2016), there is an unprecedented opportunity to save children's lives, build future human capital and gray-matter infrastructure, and provide equal opportunity for all children to drive faster economic growth. These investments in the critical 1,000 day window of early childhood are inalienable and portable and will pay lifelong dividends—not only for the children directly affected but also for us all in the form of more robust societies—that will drive future economies.

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For more information see <https://tinyurl.com/InvestmentFrameworkNutrition>