



# Fighting Malnutrition through a Development Impact Bond

*Concept Note\** Authored by Avnish Gungadurdoss

Development Impact Bonds (or their variant, Social Impact Bonds) can be a powerful tool to test, innovate, and scale-up efforts targeting child malnutrition. Child malnutrition, stunting, and other growth deficiencies are associated with significant long-term health, education, and labor market costs. Yet, cost-effective interventions exist that, if implemented today, would yield significant returns to investment. By linking payment to results, SIBs could improve the effectiveness of scarce public health resources and accelerate the expansion of evidence-based interventions.

This document provides a short introduction and considerations for the implementation of SIBs targeting malnutrition in low and middle-income countries.

## The Social Problem

Imagine if every child under the age of 5 in New York, London, Delhi and Johannesburg died. Combined, their deaths equal roughly the number of children who die each year from malnutrition.<sup>1</sup> Their deaths, and malnourishment of children around the world, impose a significant and long term cost on society. Estimates suggest that the reduced growth and life chances of undernourished children leads to a loss of up to 11% of productivity in Africa and Asia.<sup>2</sup> One study found that stunting led to an average 20% decrease in adult income, leading to a global cost of an estimated \$20 to \$30 billion annually.<sup>3</sup> Early interventions during the first 1000 days after conception have long-lasting effects throughout their lives, creating stronger, more productive and better educated adults.<sup>4</sup> Despite this, 20% of women still do not have a single antenatal care visit before birth, and for those who do, the coverage of interventions and quality of care is extremely variable.<sup>5</sup>

## The Opportunity

Despite these grim statistics, proven, cost-effective, evidence-based interventions exist which could dramatically improve the lives of millions of children worldwide. A Lancet series on malnutrition identified ten proven interventions<sup>6</sup> which, if implemented in 34 countries accounting for 90% of the global burden of undernutrition, would decrease the death toll by 900,000 annually, while also aiding 33 million children worldwide by reducing the rate of stunting by a fifth.<sup>7</sup> These interventions are also cost-effective—for example, in a recent report, Results for Development notes that micronutrient supplementation with “micronutrient powders” (MNPs) are simple to administer and cost just pennies. MNPs cost between just \$12 and \$20 per disability-adjusted life year, suggesting a benefit-to-cost ratio of up to 37:1.<sup>8</sup>

Yet, despite the high returns to interventions targeting malnutrition, millions of people worldwide still lack access to these life-saving interventions, while donor funding remains limited and much work remains. Nutrition programs are “chronically underfunded” and represented just 2% of official development assistance in health in 2011.<sup>9</sup> For example, “promising MNP interventions have been halted or limited due to restricted resources and a focus on time-limited pilots and studies rather than full scale-up.”<sup>10</sup> As a result, just 22 of 152 low and middle-income countries have had MNP pilots or subnational MNP projects, and just 4 countries had national-scale projects in 2011.<sup>11</sup> Although cost-

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effective interventions to malnutrition are well-known, “their sustainable scale-up still remains hampered by significant financing, logistical, and governance obstacles.”<sup>12</sup>

Given this situation, using a Development Impact Bond to address malnutrition could revolutionize malnutrition efforts by uniting international donors, governments, impact investors and service providers around a common social cause. Unlike in traditional government contracts, where governments must provide up-front or activity-based funding, in a DIB designed for malnutrition, a government would sign a contract to pay based on measured results. For example, a contract might specify a specific payment for each child who reaches a healthy height-for-weight.

Based on this commitment to pay for results, private investors then provide the needed up-front working capital to scale up programs addressing malnutrition, such as the distribution of MNPs. If providers successfully achieve an agreed upon outcome, then the government repays these investors, with a return on their investment. For example, instead of paying an organization providing antenatal care services based on how many MNPs are distributed, the contract would pay only if there were a resulting improvement in health, such as a reduction childhood stunting, proven through an independent evaluation.

A successful DIB targeting malnutrition would provide valuable benefits for all participants: delivering more effective social services to disadvantaged communities, strengthening accountability and results in government and donor financing; creating sustainable multi-year funding for effective providers; and providing investors with both a social and financial return.

## **Fighting malnutrition more effectively through a Development Impact Bond**

Development impact bonds hold distinct advantages over other alternative forms of traditional input-based financing, such as:

- **Greater value-for-money in development spending** - Donors and/or governments pay the full cost only if the intervention achieves its outcomes. If it achieves less, outcome payers pay less. In some DIB designs, the government pays nothing at all unless a certain minimum threshold is achieved.
- **More innovation and learning** - By conditioning payment on results, SIBs increase incentives to invest in innovation in the pursuit of better and more cost-effective social programs. Moreover, by focusing on results, rather than pre-defined processes, SIBs enable greater program flexibility, thus encouraging experimentation and adaptation to beneficiary needs.
- **Faster adoption of evidence-based programs** – SIBs are a market-based mechanism that incentivize investment in up-front analysis, literature review and performance-based management to ensure that evidence-based programs scale effectively. After the DIB is complete, based on the evidence produced through the impact evaluation, governments may choose to repeat the DIB or directly finance the program intervention model, thereby providing a fast-track for evidence-based programs to be validated in locally-specific contexts and reach broader public policy.

## **Welcome to the Family: Development Impact Bonds as Results-Based Financing Instruments**

Development Impact Bonds build on an existing family of results-based financing instruments. In certain circumstances, however, DIBs may be more effective than most typical results-based financing (RBF) approaches:

- **By bringing in private, up-front capital, DIBs enable a greater number and wider variety of service providers to take part in results-based financing.** Many service providers, particularly smaller ones, may not have the up-front capital, the ability to secure loans, or the risk-appetite to engage in traditional results-based financing.
- **DIBs provide a mechanism for multiple stakeholders to work together to deliver an outcome through a coordinating agency incentivized to achieve results.** In many DIBs, multiple complementary, specialized service providers come together to achieve a common goal, creating a whole that is more than just a sum of its parts. In addition, DIBs give a clear, compelling opportunity for private investors to play a role, thereby bringing new skills and perspectives to bear on persistent problems in

### **Considerations when designing a DIB**

When designing a DIB to address malnutrition, the following features should be kept in mind:

- A DIB must first identify **payment metrics** upon which payment would be conditioned. Such metrics should be simple, objective, and directly linked to the expected change while also minimizing the potential for perverse incentives. A diverse set of metrics exist. Potential metrics for a DIB targeting malnutrition might be:
  - the proportion of women who exclusively breastfeed their infants,
  - the number of normal birth weight pregnancies,
  - The % of stunted or underweight children under age 5,
- Second, a DIB must consider its **payment design**. This includes defining the risk participation structure and levels of payments by results. One possibility would be to include intermediate payments linked to outputs (e.g. antenatal care visits) as well as longer-term outcomes (e.g. low birth weight, stunting).
- Third, a DIB must address **evaluation design**. The evaluation must be independent and credible. The ideal evaluation would isolate the effect of the DIB-financed intervention from other factors that might influence the outcome metrics. One way to do this would be through a randomized control trial, but other quasi-experimental or observational approaches may be deemed credible depending on the context.
- Fourth, a DIB must consider the optimal **legal structure** to ensure confidence in payments across years and conditional on outcomes. Many international donors already engage in forms of results-based financing (SIBs are one type of results-based finance). Government procurement systems, however, may require more detailed legal analysis.
- Finally, a DIB targeting malnutrition must **identify a target group**. Targeting children and mothers who are at high-risk could serve to improve the cost-effectiveness of the program.

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<sup>1</sup> Horton, Richard, and Selina Lo. "Nutrition: A Quintessential Sustainable Development Goal." *The Lancet* (2013): n. pag. 6 June 2013. Web.

<sup>2</sup> Taylor, Anna, Alan D. Dangour, and K Srinath Reddy. "Only Collective Action Will End Undernutrition." *The Lancet* (2013): n. pag. 6 June 2013. Web.

<sup>3</sup> *Nutrition in the First 1,000 Days: State of the World's Mothers 2012*. Publication. Save the Children, May 2012. Web. <<http://www.savethechildren.ca/document.doc?id=195>>, p. 12.

<sup>4</sup> Bhutta, Zulfiqar A. "Early Nutrition and Adult Outcomes: Pieces of the Puzzle." *The Lancet* (2013): n. pag. 28 Mar. 2013. Web.

<sup>5</sup> *Improving Child Nutrition: The Achievable Imperative for Global Progress*. Publication. UNICEF, Apr. 2013. Web. <[http://www.unicef.org/publications/files/Nutrition\\_Report\\_final\\_lo\\_res\\_8\\_April.pdf](http://www.unicef.org/publications/files/Nutrition_Report_final_lo_res_8_April.pdf)>, p. 18.

<sup>6</sup> These interventions are periconceptional folic acid supplementation or fortification, maternal balanced energy protein supplementation, maternal calcium supplementation, multiple micronutrient supplementation in pregnancy, promotion of breastfeeding, appropriate complementary feeding, vitamin A and preventive zinc supplementation in children 6—59 months of age, and facility- and community-based management of severe acute malnutrition (SAM) and management of moderate acute malnutrition (MAM).

<sup>7</sup> Black, Robert E., Harold Alderman, Zulfiqar A. Bhutta, Stuart Gillespie, Lawrence Haddad, Susan Horton, Anna Larte, Vankatesh Mannar, Marie Ruel, Cesar G. Victoria, Susan P. Walker, and Patrick Webb. "Maternal and Child Nutrition: Building Momentum for Impact." *The Lancet* (2013): n. pag. 6 June 2013. Web.

<sup>8</sup> Bahl, Kanika, Emilia Toro, Claire Qureshi, and Pooja Shaw. *Nutrition for a Better Tomorrow: Scaling Up Delivery of Micronutrient Powders for Infants and Young Children*. Publication. Results for Development Institute, 2013. Web. <<http://www.resultsfordevelopment.org/sites/resultsfordevelopment.org/files/resources/Nutrition-for-a-Better-Tomorrow-Full-Report.pdf>>, p. 2.

<sup>9</sup> Ibid, p. 6.

<sup>10</sup> Ibid, p. 83.

<sup>11</sup> *Improving Child Nutrition: The Achievable Imperative for Global Progress*. Publication. UNICEF, Apr. 2013. Web. <[http://www.unicef.org/publications/files/Nutrition\\_Report\\_final\\_lo\\_res\\_8\\_April.pdf](http://www.unicef.org/publications/files/Nutrition_Report_final_lo_res_8_April.pdf)>, p. 3.

<sup>12</sup> "R4D Convenes Discussion on Financing and Endorsing the Fight against Malnutrition." Results for Development Institute, 24 May 2013. Web.