

Copenhagen Consensus: Which of these three ideas to end hunger is the best?

By Bjørn Lomborg | Posted Friday, April 27, 2012, at 6:00 AM ET
| Posted Friday, April 27, 2012, at 6:00 AM ET

Slate.com

How To Get Food on Every Table

We have enough food to feed everyone. But we need to produce even more. Here's why.



A child suffering from severe malnutrition lies on a hospital bed in Diapaga, eastern Burkina Faso. More than 180 million preschool-age children do not get enough nutrients.

Photo by Raphael de Bengy/AFP/Getty Images

In this series, Bjorn Lomborg explores the smartest investments to respond to global challenges such as hunger, chronic and infectious disease, sanitation, climate change, and global conflict. See the other articles here.

And find out which investments are currently at the top of the Slate readers' priority list. Have your say by voting at the poll at the end of each article.

The problem of hunger can be solved. The planet creates more than enough food to meet everyone's needs. But there are still about 925 million hungry people in the world, and nearly 180 million preschool-age children do not get vital nutrients.

In 2008, the last global Copenhagen Consensus project focused attention on the problem of hidden hunger. A team of Nobel laureate economists found that micronutrient interventions—fortification and supplements designed to increase nutrient intake—were the most effective investment that could be made, with massive benefits for a tiny price tag.

In Copenhagen Consensus 2012, researchers and Nobel laureates are again looking at the smartest solutions to the world's biggest challenges. In a research paper released today on hunger and undernutrition, researchers John Hoddinott, Mark Rosegrant, and Maximo Torero of the International Food Policy Research Institute once more propose that decision-makers prioritize micronutrient interventions, and they update the analysis of the costs and benefits of doing so.

They find that for a relatively small amount of money—less than \$700 million annually—it would be possible to eliminate vitamin A deficiencies in preschool-age children, eliminate iodine deficiency globally, and dramatically reduce maternal anemia during pregnancy. But they also offer new solutions, including bundling nutrition interventions, increasing global food production, and improving the economic conditions of the rural poor through better communications and increased competition in fertilizer markets.

Chronic undernutrition has significant neurological consequences that can damage spatial navigation and memory formation, leading to loss of cognitive abilities and, in time, lower incomes. Hoddinott, Rosegrant, and Torero find that for about \$100 per child, a bundle of interventions (including micronutrients and improvements in diet quality

and behavior), chronic undernutrition could be reduced by 36 percent in developing countries. Even in very poor countries such as Ethiopia and using very conservative assumptions, each dollar spent reducing chronic undernutrition has a \$30 payoff when seen in economic terms. (The Copenhagen Consensus approach measures the costs and benefits of different investments, which a panel of Nobel Laureate experts evaluate).

Increasing global food production might seem a strange proposed policy given that globally, food production actually exceeds food needs. But the researchers argue that lower prices are necessary to make food more affordable and to provide a buffer against some of the negative consequences of climate change. Hoddinott's team looks at how to speed up improvements in agricultural production. This means first and foremost increasing research and development to insure higher yields through extensive breeding. But the researchers also look at ways to increase tolerance to drought, heat and salt, identifying and disseminating the best varieties of crops, addressing problems like wheat rust, developing resistance to cattle diseases like East Coast Fever, and focusing on soil diagnostics to ensure that optimal combinations of organic and inorganic fertilizers are used.

They propose an \$8 billion to \$13 billion increase in annual global public investment in agricultural research and development. (The team uses economic modeling to calculate the results on yields, incomes, GDP growth, and prices.) This investment would mean that in 2050, canola oil would be 68 percent cheaper, and rice would be nearly 25 percent cheaper than it would otherwise be. There would be 200 million fewer hungry people around the world. Taking global population growth into account, hunger would be 63 percent less prevalent in 2050 than it was in 2010, with the reduction most pronounced in South Asia and Sub-Saharan Africa. Spending an additional \$8 billion per year would, by 2050, reduce the number of hungry people in the world by 210 million and the number of underweight children by 10 million. Put into economic terms, the benefit-cost ratio of this spending is 16 to 1, indicating high returns to expanded investment in agricultural R&D.

Roughly 80 percent of the global hungry live in rural areas and half are smallholders. The researchers propose a dual approach to improving the economic conditions of the rural poor, by providing market information through cellphones and reducing barriers to fertilizer access.

In India, the Reuters Market Light program sends text messages to smallholders with crop advice. The monthly cost is \$1.50, and recipients get configurable, location-specific weather forecasts, local price information, and local and international commodity information. Hoddinott looks at African and south-Asian studies into the impact of improved market information, and concludes that with the most pessimistic assumptions this investment can be justified only in a few countries. But under any other set of assumptions, benefits will exceed costs and in some cases do so by a considerable factor, up to 8.35 in return for every dollar spent.

There have been mixed results from policies designed to stimulate sustainable fertilizer use, but Hoddinott's team notes that not much has been said about developing regions and their increasing dependence on imported fertilizer. A small number of countries control most of the production capacity for the main nitrogen, phosphate, and potash fertilizers. In most cases, the top four firms control more than half of each country's production capacity. Policymakers could consider forcing the breakup of this concentrated industry. But apart from the disruption this would cause, this could lead to a loss of economies of scale. Regulation is another possibility, but imposing price restrictions could lead to unproductive rent-seeking. Instead, the researchers propose investment in the construction of new production capacity. Private companies are deterred from entering the market by high fixed costs and strategic pricing behavior by incumbents, so the researchers outline a case for public investment in production capacity with the understanding that the operation of the facility would be turned over to the private sector. Hoddinott estimates that building fertilizer plants with annual production capacity high enough to be a top-four firm would cost \$1.2 billion in South Asia and \$700 million in Africa. Put into economic terms, the net present value of doing so is \$12.5 billion.

There are extremely cost-effective ways to respond to the problem of hunger and malnutrition. But which ones should be the top priority for policymakers and philanthropists? How could limited money best be spent to combat global challenges? Have your say by voting below. Tomorrow, we look at the ways we can respond to chronic disease—and how a rethinking of development aid spending may be required.

In this series, Bjorn Lomborg explores the smartest investments to respond to global challenges such as hunger, chronic and infectious disease, sanitation, climate change, and global conflict. See the other articles here. And find

out which investments are currently at the top of the Slate readers' priority list. Have your say by voting at the poll at the end of each article.

X



MySlate is a new tool that you track your favorite parts Slate. You can follow authors and sections, track comment threads you're interested in, and more.