EXECUTIVE SUMMARY

Since the 2007-8 food price crisis, alarms have sounded regarding our ability to feed a growing population in 2050. Some warn that we need to double food production; others estimate that food production must increase by 60-70%. All feed the alarmist notion that global hunger is the result of flagging food production amid looming resource constraints. The misguided policy prescriptions that follow typically call for the expansion of industrial-scale agricultural development, ignoring the true threats to our global food supply: biofuels expansion, inadequate investment in climate-resilient agriculture, lagging support for small-scale and women food producers, and the massive loss of food to spoilage and waste.

Most of the recent warnings derive from a group of economic modeling studies that were recently reviewed by researchers at Tufts University’s Global Development and Environment Institute. In their assessment, the Tufts researchers found that many of the public pronouncements calling for a doubling of global food production by 2050 are based on outdated or flawed economic forecasting and misleading characterizations of this research. More reliable estimates of current supply, productivity, and demand trends — assuming business-as-usual policies — suggest both the need and the capacity to increase agricultural production by 60% over 2005-7 levels by 2050. This is a far cry from doubling food production. In fact, the failure to distinguish food production from agricultural production obscures the largest single contributor to recent food price spikes: the massive expansion of agricultural biofuel production.

Rather than fueling alarmist agricultural productivism, the utility of food security forecasts should be to help decision-makers identify policies that are contributing to high and volatile prices, food insecurity, and looming resource constraints on agricultural production as well as changes that could alleviate these impacts. Most economic forecasting fails to adequately incorporate several key variables:
**Biofuels** – Biofuels expansion is a relatively recent phenomenon that has been poorly captured by most economic modeling to date. Few models adequately account for current trends, with some underestimating business-as-usual expansion by 100%. With national mandates and targets significantly driving biofuels expansion, updated forecasts are urgently needed to help policymakers assess the food security implications of current policies. Those policies are incontrovertibly resulting in rising and more volatile food prices, with up to 40% of recent price increases in agricultural commodities attributable to biofuels expansion. Those policies are projected to divert as much 13% of cereal production from needed food production by 2030.

**Inadequate and poorly targeted agricultural investment** – Agricultural investment is key to increasing food production. Whereas many projections stress the importance of agricultural productivity growth, few models assess different priorities for agricultural research and investment. A growing consensus supports increased investment in climate-resilient food production, focusing on small-scale producers in food-insecure parts of the world. Yet most research, private and public, focuses on large-scale, input-intensive agricultural development. So too does most investment, driven by private sector-led projects, such as the “New Alliance for Food Security and Nutrition” initiated by the G8.

**Food waste and spoilage** – One-third of global food production fails to nourish anyone. In industrialized countries, wasteful consumption patterns result in tremendous losses, while in developing countries poor infrastructure means high rates of spoilage before food makes it to market. Most current forecasts ignore the possibility that measures could be taken to address this problem, assuming continued waste of food at current rates. This assumption alone puts alarmist calls for increased food production into question.

**Climate change** – We are only just beginning to understand the implications of climate change for agriculture and food security. These impacts, plagued by multiple layers of uncertainty, are poorly incorporated into most economic forecasts. With the outcome of international climate negotiations uncertain, urgent attention is needed to mitigate industrial agriculture’s tremendous contribution to global warming and help developing country food producers to adapt to a changing climate.

In all of these areas, policymakers need forecasts to help them interrogate established policies and practices that need to change, such as consumption patterns, energy policies, unfair distribution and access, land use, and investment priorities.

Meanwhile, a growing body of experience at the local and regional levels, demonstrates the lasting value of investments in smallholder farming and sustainable agricultural methods. Strategic policy changes and investments in this area can scale-up successful approaches and expand them to regions where they are most appropriate and most needed, especially in regions where food security is tenuous despite high agricultural potential.

This report reviews the economic forecasting on which most of the alarmist 2050 pronouncements are based, presents alternative modeling that can add useful insights, and identifies areas in which further research can guide policymakers to change failing business-as-usual policies. This much is clear: hunger, now and in the future, is less a matter of inadequate production than inequitable access to food and food-producing resources; and a singular focus on increasing production is misguided as we simultaneously waste one-third of the food that is produced and pursue a course to devote another 13% of cereals to feeding our cars instead of our people.

For the full report, go to [www.actionaidusa.org/publications/feeding-world-2050](http://www.actionaidusa.org/publications/feeding-world-2050)