

## Turning point: Feeding the world sustainably

*The costs and opportunities of long-term  
food system transformation*

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### Key messages

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# Turning point: Feeding the world sustainably

## Executive summary



### Turning point: Feeding the world sustainably The costs and opportunities of long-term food system transformation

**Today, around 730 million people—nearly 10% of the global population—are undernourished.** Action to sustainably transform the global food system, including taking action on climate change to limit warming to below 2°C, could see global economic growth (GDP) gains of \$US121 trillion by 2070, while making significant progress toward enhancing food security by lowering global food prices by 16%. More food, sustainably produced, could contribute to reducing the number of undernourished people by 300 million.

#### Key findings and take-aways

This analysis leverages Deloitte’s **D.Climate model** to assess economic implications of five proposed solutions – ranging from leveraging technological improvements and accelerated innovation to improve agricultural production, to reducing global emissions. The report also spotlights case studies that illustrate how some of these sustainable solutions are already effectively improving the global food supply.



Action to sustainably transform the global food system, including taking action on climate change to limit warming to below 2°C, could see global economic growth (GDP) gains of \$US121 trillion by 2070.



In the absence of such actions on climate change, the global economy would face a US\$190 trillion hit to economic growth as a result of agricultural decline, reduced labor productivity, and damage to capital and land.



This transformation could also make significant progress toward enhancing food security by lowering global food prices by 16%. Enhancing the sustainability of the global food system could see the world produce an extra 1,030 trillion calories in 2070 - enough to meet the minimum needs of an additional 1.6 billion people in 2070; one-in-five of these extra calories in regions of the world where hunger is more prevalent could support an additional 300 million otherwise undernourished people.



Over the same period, emissions from the global food system would fall by around two-thirds, aiding the global path to net zero.

#### For more information



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# Turning point: Feeding the world sustainably

## Key messages



### Turning point: Feeding the world sustainably The costs and opportunities of long-term food system transformation

This report analyses the long-term benefits of five system-level solutions to feed the world more sustainably to improve outcomes for both people and planet. Action to sustainably transforming the global food system, including taking action on climate change to limit warming to below 2°C, could see global economic growth (GDP) gains of \$US121 trillion by 2070, while making significant progress toward enhancing food security by lowering global food prices by 16%. More food, sustainably produced, could contribute to reducing the number of undernourished people by 300 million.



#### It's time to transform the global food system

Today, around 730 million people—nearly 10% of the global population—are undernourished.

To feed the world sustainably by 2070 would require limiting warming to below 2° C while producing 40% more calories to feed a projected global population of around 10 billion people.



#### Continuing business-as-usual is not an option

In the absence of actions to create a sustainable food system, feeding a growing population will mean unsustainable pressures on natural resources. Land used by agriculture could be 13% larger than it was in 2020 – an area twice the size of India. Inaction on climate change alone would see the global economy facing a US\$190 trillion hit to economic growth through agricultural decline, reduced labor productivity, and damage to capital and land.



#### System-level change is required

The global food system challenge is three-fold: addressing the needs of a growing population, lifting more people out of the undernourishment cycle, and decarbonizing the agricultural sector and food system at the same time.

Each value chain actor—finance, tech, supply chain, government—will need to be involved to drive the solutions needed across the system.



#### The greatest gains could be seen in low-income countries

Lower-income countries—like Sub-Saharan Africa, Southeast Asia, Oceania, and South America—could see the greatest gains, including a 12% boost in GDP and the largest increase in food consumption per capita, with an average increase in consumption in these countries of as many as 626 calories per person per day in 2070.

What's more, the concentration of these additional calories produced globally is expected to increase over time in areas with significant populations facing hunger.



#### Five solutions are key to realizing the benefits of this sustainable transformation

- Five system-level solutions contribute to feeding the world more sustainably.
1. Accelerate innovation, technology, and productivity improvements
  2. Invest in protecting, restoring, and improving natural capital
  3. Reduce global emissions
  4. Support and encourage more sustainable consumer-led choices and diets.
  5. Enhance circularity



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