

On climate, food and agriculture

1. Climate change both drives and results from hunger. The unsustainable use of land, soil, water and energy for food contributes to greenhouse gas emissions that cause rising temperatures. Higher temperatures in turn affect resources to produce food. Up to 811 million people in the world faced hunger in 2020, as many as 161 million more than in 2019.
 2. Systems to produce, package and distribute food generate a third of greenhouse gas emissions and cause up to 80 per cent of biodiversity loss. Without intervention, food system emissions will likely increase by up to 40 per cent by 2050, given rising demand from population, more income and dietary changes.
 3. The food system currently accounts for around 30 percent of the world's total consumption of energy, most still produced using fossil fuels that generate emissions.
 4. Over 17 per cent of food is wasted, and up to 10 per cent of global greenhouse gas emissions are associated with food that is not consumed.
 5. Under higher temperatures, declines in crop yields are likely. Heat stress also results in impaired quality and increased waste.
 6. The ocean has absorbed more than 90 per cent of the excess heat in the climate system, making it more acidic and less productive. This along with practices such as overfishing threatens marine resources that feed 3.2 billion people.
 7. Changes in snow cover, lake and river ice, and permafrost in many Arctic regions have disrupted food supplies from herding, hunting, fishing and gathering activities, harming livelihoods and the cultural identity of Arctic residents.
 8. Many practices can advance climate adaptation in food systems, such as erosion control, grazing land management, genetic improvements for tolerance to heat and drought, heterogeneous diets, and reduced food loss and waste.
 9. Pilot climate-smart agriculture initiatives in a number of countries have boosted productivity, lowered emissions, improved soil quality and water efficiency, and increased incomes and climate resilience.
 10. Consumption of healthy and sustainable diets presents major opportunities for reducing emissions from food systems and improving health outcomes, including through lower consumption of energy- and land-intensive animal-sourced foods.
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