Diet changes in China could slash agricultural emissions by almost half

New paper reveals agricultural-source emissions could be reduced by between 46% and 51% by 2050.

New analysis by the Food and Land Use Coalition (FOLU) in China has revealed that greenhouse gas (GHG) emissions from China's agricultural sector could be nearly halved by 2050 if healthy diets were adopted by people in China, based on the latest version of the Chinese dietary guidelines (CDG-22) or the EAT Lancet Commission recommendations.

Such a shift would help agricultural-source emissions to peak before 2030 at the latest, and ensure that the Chinese agricultural sector develops in a manner that is compatible with global emissions pathways that limit global warming to 1.5°C as set by the Paris Agreement.

The findings are outlined in a new paper, 'The impacts of healthy diets on future greenhouse gas emissions in China'. The paper makes use of three different scenarios to analyze the consequences of changes in dietary patterns for mitigating GHG emissions from the agricultural sector: business-as-usual (BAU); adoption of the EAT Lancet Commission recommendations for healthy and sustainable diets; and adoption of CDG-22. Both the adoption of CDG-22 and the EAT Lancet Commission recommendations resulted in significant emissions reductions compared to BAU.

Both of these diets advocate eating a wide variety of plant-based foods, including fruits, vegetables, legumes, nuts and cereals, with moderate amounts of eggs, poultry, meat and dairy products. Shifting diets in China towards those recommended by the CDG-22 or EAT Lancet would also have significant health benefits, helping to reduce the public health costs of obesity and non-communicable diseases such as type II diabetes, cancer and cardiovascular diseases.

In both scenarios, emission reductions are achieved primarily through the reduction of methane (CH_4) emissions and to a lesser extent through the reduction of nitrous oxide (N_2O) emissions. The reduction of CH_4 emissions accounts for 67-68% of the total GHG reduction of emissions in the two scenarios.

China's agricultural-source GHG emissions and associated mitigation potentials vary significantly by region. However, in most provinces, and for China as a whole, the reference diets imply a reduced livestock sector and associated decreases in emissions from enteric fermentation and other livestock-related sources.

Seth Cook, Asia Coordinator at the Food and Land Use Coalition (FOLU), said: *"The findings of this study illustrate the significant impact that large-scale changes in diet - and the accompanying food system shifts - can have on both the environment and on public health.*

There is ample cultural precedent for the shift in question, as traditional Chinese diets are rich in vegetables and plant-based proteins like tofu. Nevertheless, transitioning to more sustainable and healthier diets will be a particular implementation challenge as it will require changing people's dietary

behaviour. Successful transitioning will require clear, locally adapted policy incentives that engage stakeholders, and that ensure equity and justice.

FOLU aims to strengthen the scientific and economic evidence base for food systems policy reform. We hope that this paper contributes to the food systems transformation conversation within China, and emphasizes the potential impact of policies that prioritize both human and planetary health."

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Full report available on request:

The impacts of healthy diets on future greenhouse gas emissions in China

About the Food and Land Use Coalition (FOLU)
www.foodandlandusecoalition.org
The Food and Land Use Coalition (FOLU) is a global community of innovators and experts working to advance sustainability, equity and resilience in food and land use systems. United by a shared vision of rapid and transformative change, this network of country platforms (Brazil, China, Colombia, Ethiopia, India, Indonesia, and Kenya), partners organizations and Ambassadors, strives for a world in which food and land use systems enable people and nature to prosper. Created in 2017, FOLU advances diversity, embraces disruptive thinking, and forges consensus through an evidence-based approach. The coalition empowers farmers, policymakers, businesses, investors, and civil society to unlock collective action at scale.