SPEAK UP & ACT NOW: SHORT GUIDES TO ADDRESS CLIMATE CHANGE[i]

FOOD PRODUCTION, CONSUMPTION & WASTE

QUESTION: Does our food system contribute to climate change?

ANSWER: Yes! The world's food system is responsible for 25-30% of global greenhouse gas emissions, the cause of global warming. Key sources of these food system emissions include deforestation, livestock, and food waste. Meat, particularly beef, and dairy make up about half of these food system emissions, and 14.5% of all global greenhouse gas emissions, according to the Food and Agriculture Organization of the United Nations. The reason is twofold.

- Livestock requires about 100 times the amount of land for an equivalent kilocalorie of plant-based food. From 60-80% of global deforestation occurs to create agricultural land. If we were to eliminate beef, mutton, and dairy from diets globally, we would reduce the land area needed for food production by 3 billion hectares—the area of North America and Brazil combined (Ritchie, 2021).
- Cattle release methane—a potent greenhouse gas—as part of their digestion as do other ruminants.

ACTIONS – WHAT CAN WE DO?

1. **MODIFY YOUR DIET.** When it comes to your diet, what you eat will have the biggest impact on greenhouse gas emissions.
   - **Eat less beef and dairy.** Reduce portions and frequency and substitute with whole grains, vegetables, pork, poultry, eggs, and fish. A good example of this is the Mediterranean Diet.
   - **Start eating a whole food, plant-based diet.** Research shows that even moderate changes to our diets can make a difference. Plant-based foods, including plant-based proteins, have much lower carbon footprints than animal products because they require much less land—limiting deforestation—and, with few exceptions, do not emit greenhouse gases themselves.
2. **CUT FOOD WASTE.** Buy only what you need and compost any food waste. Globally, food waste accounts for an estimated 6-10% of greenhouse gas emissions. In the United States, about a third of food goes to waste, according to the U.S. Environmental Protection Agency.
3. **SHOP AT FARMERS MARKETS.** For highly perishable foods, it helps to buy locally and eat seasonally. This is because highly perishable food must be transported by air and

air travel emits a lot of carbon dioxide. Additionally, local farmers often use more sustainable practices like regenerative and organic farming.

4. **SUPPORT REGENERATIVE AGRICULTURE.** Regenerative agriculture is a farming and ranching philosophy that aims to restore soil health. Regenerative practices include no till, cover crops, crop rotation and intercropping, avoidance of pesticides, and use of compost and animal manure. Healthy soils store more carbon, keeping it out of the atmosphere, and are more resilient to extreme weather events like droughts and flooding. Support farms practicing regenerative agriculture through food purchases; banking practices (use banks that provide loans to regenerative farms); and advocacy for state and local government policies that provide technical, financial, and legal support for regenerative agriculture.

5. **SUPPORT THE FARM BILL.** Under the Biden Administration, the Inflation Reduction Act (IRA) included a big investment ($19.5 billion) for the U.S. Department of Agriculture to invest in nature-based solutions and climate-smart agricultural practices that would reduce greenhouse gas emissions, spur economic growth in rural areas, and increase rural resilience to climate disasters. It's important to preserve the IRA, including the allocation for climate-smart agricultural practices.

RESOURCES – WHERE CAN I LEARN MORE?

- "The Diet that Helps Fight Climate Change," a video by Climate Lab, a production of the University of California in partnership with Vox
- "Your Questions About Food and Climate Change, Answered" by Julia Moskin and others (published online in *The New York Times* on Apr. 15, 2022)
- "The Hidden Environmental Costs of Food" by Lydia DePillis and others (published online in *The New York Times* on Sept. 19, 2024)
- "Food and Climate Change: Healthy Diets for a Healthier Planet," United Nations (accessed Sept. 14, 2024)
- "Interactive: What is the Climate Impact of Eating Meat and Dairy?" by Daisy Dunne, Carbon Brief
- "Environmental Impacts of Food Production," Global Change Data Lab
- For compost drop-off locations in Richmond, Virginia, click HERE. Scroll down and click on Richmond Compost Initiative.

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[i] Prepared by members of the University of Richmond Osher Special Interest Group on addressing climate change (2024-25)