CLIMATE CHANGE & FOOD

What we eat has an impact on climate. In fact, the global food system accounts for approximately one-third of all human-created greenhouse gas emissions.[27] It is also a major source of land and water degradation. The relationship between food and climate change is complicated but important to understand. It is hard to imagine that your banana-mango smoothie has contributed to climate change. Yet, many of those delicious smoothie ingredients have been shipped far distances (bananas from Costa Rica and mangos from Mexico) and have likely required synthetic fertilizers and pesticides in their farming. Your morning smoothie has generated a lot of transportation and farming-related emissions to get to your blender. Similarly, your Thursday-night steak dinner has produced a considerable quantity of greenhouse gases in its production. The food grown to feed the cows, the land they grazed on, and the large volume of methane that the cows release into the atmosphere as a digestive by-product (cow farts) also directly impacts the climate. By learning about the global food system, such as how our food is grown and where it comes from, we can start making climate-friendly food choices.

Facts and figures

To understand the unique and extensive relationship between food and climate, it is important to consider the life cycle of your food. How it was grown, manufactured, packaged, and transported all play a role in greenhouse gas emissions and, as a result, climate change. There are three main ways food can be linked to climate change:

Food Production

- Animal agriculture (meat and dairy production) generates a significant volume of greenhouse gases (such as methane and nitrous oxide) and is estimated to be responsible for 18% of all greenhouse gas emissions.[28]
- Livestock require large swathes of land for grazing and occupy 30% of Earth's entire land surface for this purpose.[29] This need for space has been a significant cause of deforestation. Forests are carbon sinks: when cleared for livestock, they can no longer help to mitigate climate change by absorbing and storing carbon in their trees and soil.
- Livestock are often fed grain. To produce 1 kilogram of beef there is a need for 5 to 7 kilograms of grains.[30] Consider all of the land and resources needed to grow, process, and transport this grain that is going to feed our food, grain that could also be directly feeding the estimated 805 million people who go hungry each day.[31]
- Red meat accounts for about 150% more greenhouse gas emissions than chicken or fish.[32]
- Commercial agriculture frequently uses synthetic pesticides and fertilizers, which are often made from fossil fuels. Manufacturing and transporting these chemicals use significant quantities of energy and produce greenhouse gases. These chemicals also contaminate land, air, and water.
- When large farms require extensive plowing and machinery to process their products, they generate greenhouse gas emissions.
- It is estimated that agriculture is responsible for 75% of deforestation across the world.[33]

Food Transportation

- Food miles refer to the distance food is transported from the time of its production until it reaches the consumer.
- The average meal travels 1,200 kilometres from the farm to plate.[34]
- Food grown closer to home is often considered to be more climate-friendly. This is primarily due to fewer greenhouse gas emissions associated with transportation, compared to items travelling far distances.
- When foods have to travel long distances, they often need to be refrigerated to ensure they don't spoil. The energy used to store this food generates greenhouse gas emissions.

Food Waste

- Each year, over one-third of the food that is grown around the world goes to waste. This is primarily due to food spoiling in transit or being discarded by consumers.[35]
- Approximately 1.3 billion tons of food is wasted each year, which is worth nearly $1 trillion at retail prices.[36]
- The energy that goes into the production, harvesting, transporting, and packaging of that wasted food generates more than 3.3 billion metric tons of carbon dioxide. If food waste were a country, it would be the world's third largest emitter of greenhouse gases, behind the United States and China.

SUPPORT LOCAL

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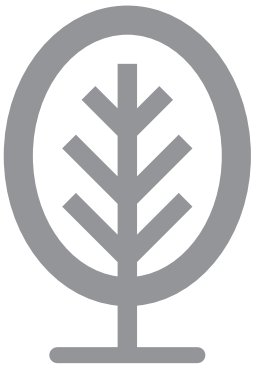

PLANT TREES

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Climate leadership at school: Food

Did you know that one student's lunch will generate approximately 30 kilograms of waste per school year, or an average of 8,500 kilograms of waste per school each year?[37] With increasing concerns about the health and environmental issues associated with our food choices, schools are a fantastic place to take action to reduce this type of pollution.

Students and schools can be climate leaders by educating members of their community and taking action on reducing food-related emissions. One way is to run campaigns for students, staff, and families on the options and benefits of making climate-friendly food choices.

Reduce Your Food Footprint: Host a whole school campaign

There are many opportunities to involve the whole school community in climate leadership food activities. Some options include:

- **Climate-friendly food pledges:** kick off your campaign by asking students to make a pledge to be climate food leaders. Collect the pledges and display them in a common area of the school.
- **The great big crunch:** distribute local apples or carrots to all school members and take a synchronized bite into crunchy, fresh local produce.
- **Local recipe day:** buying local food reduces the distance your food travels, decreases greenhouse gas emissions, and supports your local farmer and local economy. Have each class at your school research local foods and create a local food recipe book for students, staff, and families. Consider making these recipes as a fundraiser!
- **Climate-friendly food day:** invite local farmers, food organizations, and community members to attend a climate-friendly food day. Host student bulletin boards, information booths, as well as presentations from invited guests.
- **Meatless Mondays:** make the commitment as a school to go meat-free for one lunch per week. Remind students, teachers, and families about the positive effect eating less meat will have on climate change. Take it a step further and challenge families to go meat-free for breakfast and dinner on Mondays as well.
- **Vegetarian/vegan potlucks:** create a school food celebration by sharing vegetarian/vegan recipes at a potluck. This could be a great opportunity to try meat alternatives and learn about climate-friendly food choices.
- **Plant a food garden:** growing vegetables at school provides the opportunity for rich learning. You can grow your food without chemicals while eliminating transportation-related emissions.