

ISK CLIMATE CHANGE & HEALTH SERIES

SUSTAINABLE DIETS ISSUE

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Diets & climate change

In the last decade or so, your awareness about the impacts of food on the environment has probably grown, helped along by mainstream movements like Meatless Mondays, news of “high-footprint” foods, and a growing vegan community based not on animal rights, but on carbon emissions. You might have heard the term “sustainable diet” tossed around. It can be difficult to pick through all the information out there and understand how and why food matters when it comes to climate change, and what we can do about it. So, let’s break it down!

In 2021, researchers published a [paper](#) stating that about 1/3 of total human-made greenhouse gas (GHG) emissions currently come from food systems. While this is certainly a wake-up-call statistic, your first question might reasonably be: what exactly is a food system?

Food systems include the activities and people in every stage from the growing to the processing to the selling to the consuming to the waste of food. The diagram on the right is a great visual for this system. Food systems look different depending on where in the world you live. Most of us only interact with the food system from retail to waste, and that’s precisely where diets and other food

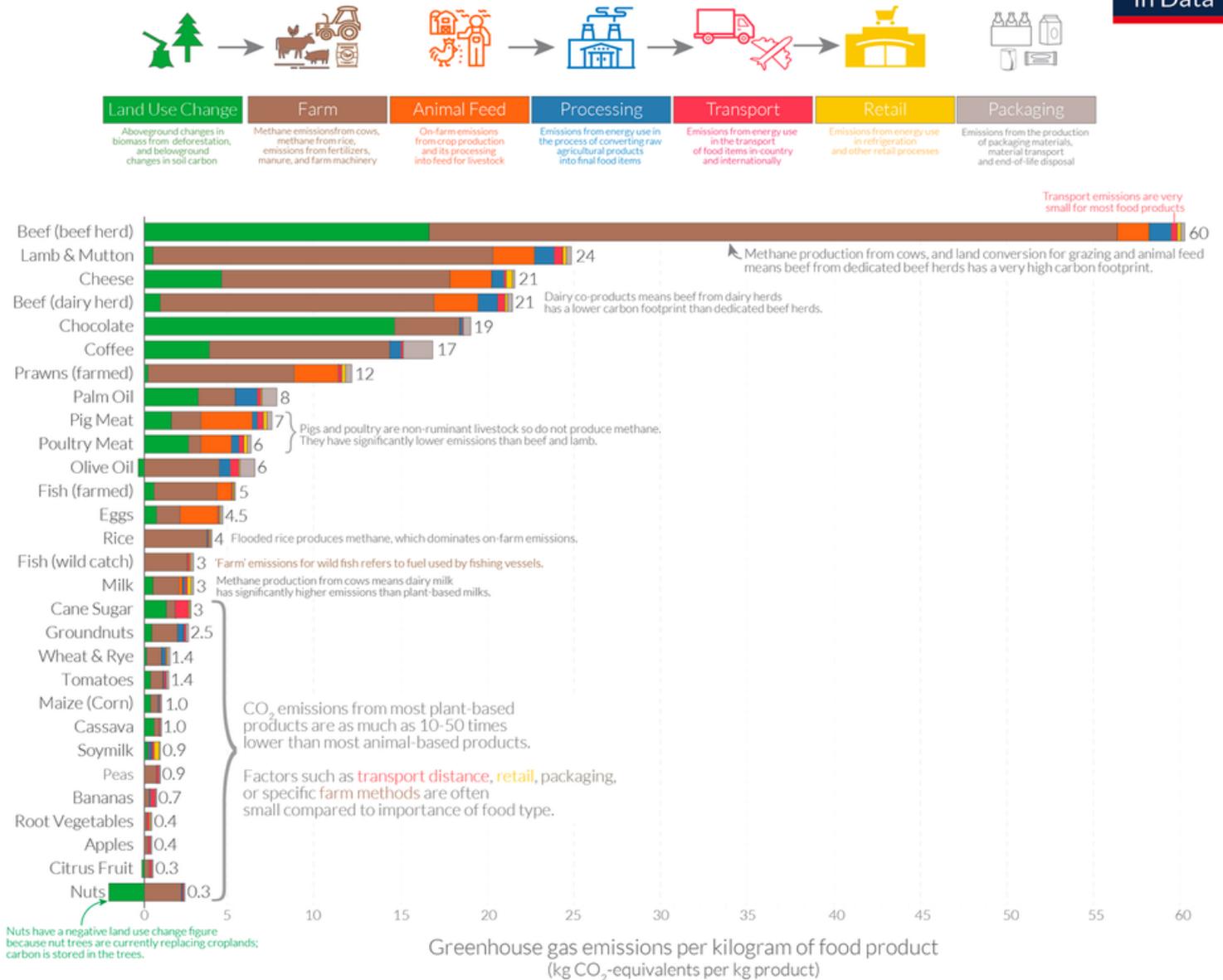


Food system diagram by [Food Systems Thinking](#) (2024)

practices come in. It turns out, what we choose to buy and eat really does make a difference. Every food has an environmental footprint, which includes everything from energy and water needed to produce it, to the pollution caused by production and processing. For the sake of simplicity, let's focus on GHG emissions, as they're the biggest contributor to climate change. As the chart below shows, animal-source foods and some 'discretionary' foods (foods we don't necessarily need but buy when we have the money, like chocolate and coffee) tend to have the highest footprint, with plant-based foods having much lower impacts. As we can see, emissions come from a variety of activities, from land use change to packaging.

Food: greenhouse gas emissions across the supply chain

Our World
in Data

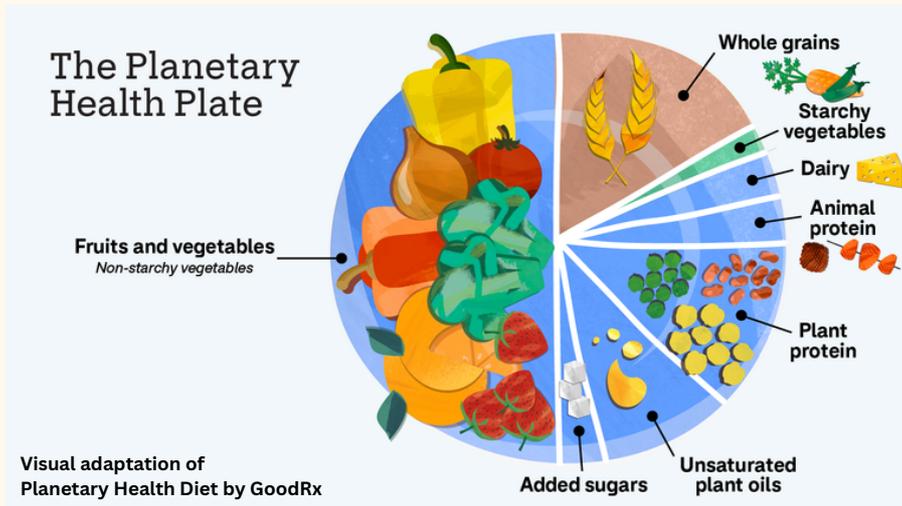


Note: Greenhouse gas emissions are given as global average values based on data across 38,700 commercially viable farms in 119 countries. Data source: Poore and Nemecek (2018). Reducing food's environmental impacts through producers and consumers. Science. Images sourced from the Noun Project. OurWorldinData.org - Research and data to make progress against the world's largest problems. Licensed under CC-BY by the author Hannah Ritchie.

So what is a 'sustainable diet'?

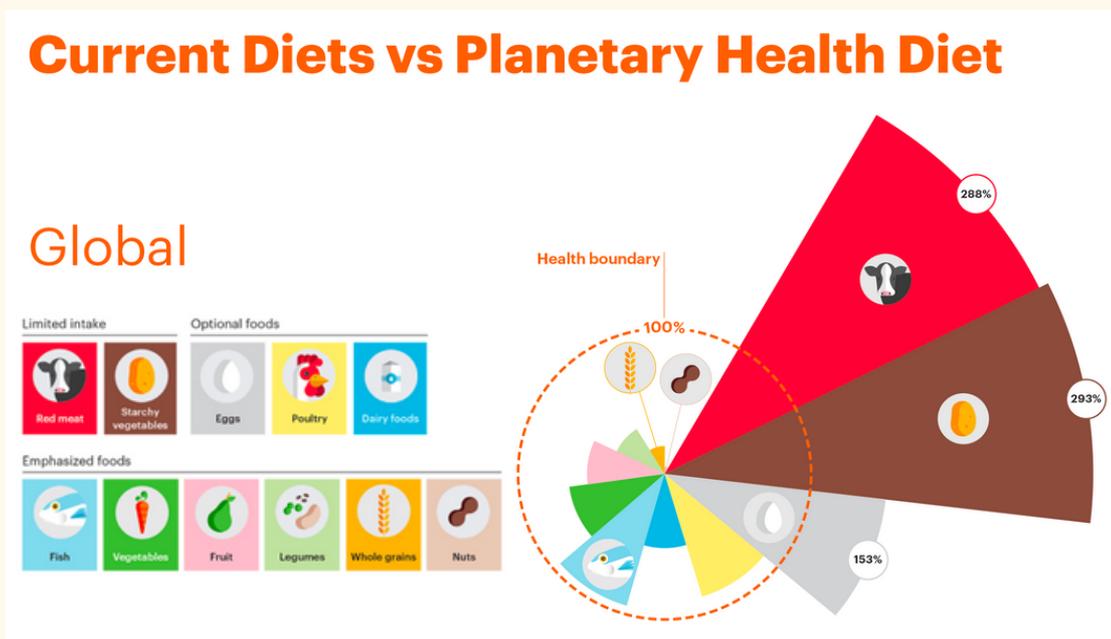
A sustainable diet is probably what you'd expect after viewing the chart above. It's a diet high in plant-based foods like vegetables, fruits, nuts, legumes (like lentils, beans, and even peanut), and whole grains. It is low in animal-source foods, and low in added sugars and ultra-processed foods (anything that comes in a box or package that has ingredients you can't pronounce!). It also treats those discretionary foods like chocolate as a treat, rather than an every-day indulgence. The EAT-Lancet Commission has created a "Planetary Health

Diet” (PHD) that gives great guidelines for what our plate should look like in order to eat well for the planet, and for ourselves. Take a look:



I don't know about you, but my diet is not a perfect match to the PHD. And globally, this is true for most people. Take a look at the next figure showing current diets vs. the PHD. The 100% boundary line shows the amount that each food should be eaten for human and planetary health, with the wedges showing what we actually consume for each food.

Current Diets vs Planetary Health Diet



So, all in all, we're WAY over on our red meat and starchy vegetable intake, and quite a bit past our egg boundary. We're about where we need to be for fish and poultry, with a little wiggle room. And as for vegetables, fruit, legumes, whole grains, and nuts—

we should be eating more. We can even afford to eat more dairy. The big takeaway from all of this information is that we can improve our health and planetary health by replacing some of our over-intake items with under-intake items more often. It's all about the balance.

What we buy and eat isn't all that goes into our food sustainability— other food practices make a difference too, and especially food waste. It is estimated that about 30% of food produced is wasted, and that number is more like 40% in the US. That means about 10% of annual GHG emissions end up being for nothing, and wasted food usually goes into a landfill where it makes even more GHG emissions. What's more, food wasted is nutrients wasted, and these nutrients could be used to nourish food insecure households. Reducing our food waste is one of the most powerful things we can do for the planet with our food choices.

Sustainable diets are healthy diets

Lucky for us, eating a sustainable diet is a win-win, because diets that are good for the planet also happen to be good for our health. While red meat is good for us in small amounts, there is plenty of research showing that overconsumption of red meat, especially processed, can lead to increased risk of cardiovascular disease, cancer, and other chronic conditions ([Liberato et al., 2021](#)). Overconsumption of starchy vegetables like potatoes also carries some risk, especially because we tend to prefer our starchy veg fried, or at least with plenty of oil or

butter. On the other hand, legumes, nuts, and vegetables are important sources of vitamins, minerals, and plant proteins that we miss out on when we under-consume them. Eating less sugar and less processed food also benefits both us and the planet. The great thing about the PHD is that it was developed with both human and planetary health in mind, so it is a good guide for both. The most important thing to remember is **balance**. Almost anything is bad for us in excess, so bringing our diets into balance is the key.

Over 1/3 of people on the planet are currently overweight or obese, and more than half of earth's population are expected to be by 2035 if our diets don't change. Not only does obesity increase our risk of heart disease, type 2 diabetes, and a number of other chronic illnesses, it can drastically affect our mental health. People living with obesity have a higher risk for depression, anxiety, and substance use, and research suggests that this is partly due to chemical changes in the brain and partly due to lower quality of life, whether perceived or actual. This trend is seen in adults as well as youth, and as rates of childhood obesity continues to climb, more physical and mental health impacts can be expected. Shifting our eating patterns toward the PHD and away from current diets can help reduce the health and mental health risks of malnutrition, primarily over-nutrition.

Actions to take

1. **Shift your diet** - Much easier said than done, right? But even small and gradual shifts toward the PHD guidelines can improve the health of our planet, as well as your own health. Maybe you already eat pretty close to the PHD— if so, you're already doing a hugely beneficial thing for the planet. Remember: the more diversity and sustainability we demand from the food system, the more it will evolve toward sustainability.
2. **Make it communal!** - Maybe your family, colleagues, or a group of friends would like to join a "PHD Challenge" where you set sustainable eating goals together. Share recipes! Share food! Host a sustainable dinner party! Prove it can be done, and can be fun.
3. **Cut your food waste** - There are lots of ways to approach reducing food waste. There are apps like Larder designed to help you keep track of what's in your fridge. There are food storage tips to help your food last longer. See Recommended Resources for more.
4. **Support local food banks and community gardens** - Here's a repeat from last month's newsletter, but it bears repeating: in Kalamazoo, our food banks make a world of difference to our community, and they often help reduce food waste by utilizing food that would otherwise be wasted. The downside is that food banks often can't supply fresh fruits and vegetables due to short shelf life and food safety concerns. That's where community gardens come in! These can be a great source of fresh produce in the summer and fall, and can also help get individuals involved in food growing.
5. **Talk to your clients about ways to eat a more sustainable and healthy diet** - Check out some of the resources on page five, along with helpful infographics for sharing.
6. **Educate clients on Michigan's Double-up Food Bucks program** - Bridge Card holders are matched dollar-for-dollar on their fresh produce purchases, up to \$20 a day. This helps combat socioeconomic drivers of food insecurity, and also encourages individuals to eat more diverse and sustainable diets.
7. **Keep fighting for equity in food** - Knowing about sustainable diets is no use if an individual has no access to or can't afford them. Equity is a huge issue when it comes to "voting with our dollars" in general, and food is no exception. Fighting for equity across the board improves the odds of everyone having safe and affordable access to the components of a healthy, sustainable diet.

Remember, talking about food, diets, and dietary health can be a sensitive subject for many people. Approach conversations with friends, family, and clients on these topics with care and consideration.



This month, talk to your colleagues about sustainable diets:

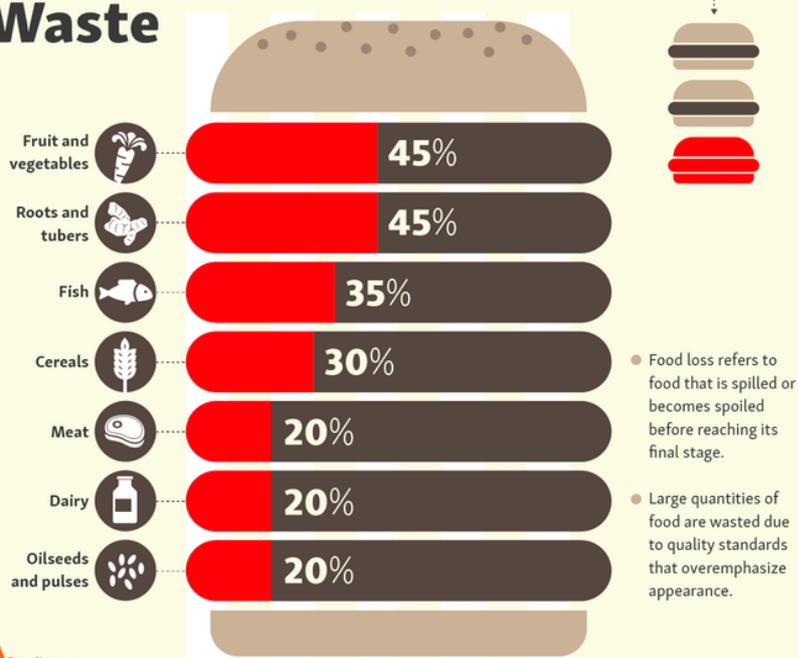
- How does their diet line up with the PHD?
- Do they have any tips for reducing food waste?
- Do they have any delicious vegetable- or legume-forward recipes to share?
- Are they interested in joining you for a PHD challenge?

Recommended Resources

- [Plate and the Planet from The Nutrition Source](#)
- [Our World in Data GHG food item charts](#)
- [Bar graph showing nutrients wasted due to food waste per year](#)
- [Tips for reducing food waste at home](#)
- [Stopfoodwaste.org website](#) - tips, recipes, news, and more.
- [9 Practical Tips for a Sustainable & Healthy Diet](#)
- [Sustainable Diets are Healthy Diets](#)
- [One Blue Dot: the BDA's Environmentally Sustainable Diet Project](#)

Global Food Waste

Approximately 1.3 billion tons of food is lost or wasted every year. That is about **one-third** of all the food produced for human consumption in the world.



9 PRACTICAL TIPS FOR A HEALTHY & SUSTAINABLE DIET

- eat more fruits and vegetables
- eat locally, when in season
- avoid eating more than needed, especially treats
- swap animal protein for plant-based ones
- choose whole grains
- choose sustainably sourced seafood
- eat dairy products in moderation
- avoid unnecessary packaging
- drink tap water

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