



# FIGHTING CLIMATE CHANGE WITH FOOD

## A Toolkit to Encourage Climate-Friendlier Eating

*“The wonderful thing about food is you get three votes a day. Every one of them has the potential to change the world.” – Michael Pollan*

**YOU ARE:** A restaurant manager, chef, institutional dining director, dietitian, sustainability manager, plant-based food advocate, or anyone else who influences what other people eat.

**THE PROBLEM:** Animal-based foods have a tremendous impact on both human and planetary health. Food production is responsible for 25-30% of global greenhouse gas (GHG) emissions. The livestock sector alone contributes 14.5% of GHG emissions—more than the entire transportation sector. According to the [EAT-Lancet Commission](#), “Without action, the world risks failing to meet the UN Sustainable Development Goals (SDGs) and the Paris Agreement, and today’s children will inherit a planet that has been severely degraded and where much of the population will increasingly suffer from malnutrition and preventable disease.” Substantial dietary change must occur to support climate stability and improve health.

**THE SOLUTION:** Make it attractive, easy, and rewarding for customers to choose climate-friendlier foods—including more plant foods and few animal foods, especially beef. Decades of public health research tells us that theory-driven interventions targeting both supply and demand tend to work best. Here’s how to do it: 1) Serve delicious climate-friendlier plant-based options, and 2) Implement a social marketing campaign about food and climate change rooted in behavior change theory to drive consumer choice. **At UCLA we observed a 54% increase in sales of low carbon footprint menu items following the introduction of new climate-friendlier menu items and a social marketing campaign. You can see the full research article here: <https://doi.org/10.1086/720450>**

**THE RESULT:** People consume more climate-friendlier foods, which supports planetary health and also human health especially if unprocessed, whole plant foods are chosen.

# How to Use This Toolkit

This toolkit is designed to support operators in promoting climate-friendlier food choices through social marketing. Campaign materials are rooted in behavior change theories—expectancy value/exchange theory and behavioral economics/nudges—which emphasize the exchange of positive outcomes for behavior and communicate messages in eye-catching, intuitive ways. In other words, materials clearly highlight the benefits of choosing climate-friendlier foods. The posters and graphics included in this toolkit can be used in restaurants and on websites. Posters are formatted so you can include your logo or name.

Carbon footprint icons are provided to help consumers easily identify low (green earth) and high (red earth) impact foods. Criteria are provided for operators to apply the icons. Criteria are informed by both academic research and real-world experience.



**Delicious and satisfying plant-based menu options are a pre-requisite:** Before launching the social marketing campaign, you must ensure your menu includes attractive climate-friendlier options that meet the low carbon footprint criteria below. Using innovative recipes and taste-focused labels can make people more likely to choose plant-based foods. See Edgy Veggies Toolkit for more information on labeling: [http://sparqtools.org/wp-content/uploads/2019/10/20190925\\_EdgyVeggiesToolkit-1.pdf](http://sparqtools.org/wp-content/uploads/2019/10/20190925_EdgyVeggiesToolkit-1.pdf)

## STEP 1: Apply the Criteria and the Low and High Carbon Footprint Icons

### 1. Identify low and high carbon footprint menu items using the science-based criteria.

The criteria were determined using peer-reviewed food group lifecycle analyses and food intake recommendations from the [Planetary Health Diet](#). The daily value dietary carbon footprint of 1,780 grams CO<sub>2</sub>-equivalent was calculated using the Planetary Health Diet recommendations. Foods that contribute up to 25% of the daily carbon footprint are considered low carbon footprint and food that contribute over 50% are considered high carbon footprint. Criteria were streamlined to ensure ease of implementation and sustainability in day-to-day operations. You can see the full spreadsheet with criteria and background here: <https://ucla.in/3KPZkbH>

#### Criteria

##### Low Carbon Footprint

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#### a) All vegan menu items

#### b) Vegetarian menu items containing no more than one of the following:

- Cheese < 1.5oz
- Eggs < 2 or Liquid Eggs < 4oz
- Yogurt < 6oz

#### c) Seafood menu item containing:

- Mollusks < 8oz
- Certified Sustainable Fish < 4oz

You can download a Monterey Bay Aquarium Seafood watch Guide for more information on sustainable fish: [www.seafoodwatch.org/recommendations/download-consumer-guides](http://www.seafoodwatch.org/recommendations/download-consumer-guides)

## STEP 1: Apply the Criteria and Low and High Carbon Footprint Icons (continued)

### High Carbon Footprint

#### Menu items containing:

- Beef
- Lamb
- Cheese > 3.5oz

Food Category	GHG/g	GHG/4oz	% DV Footprint
Vegetables	0.73	83	5%
Beans & lentils	0.78	88	5%
Rice	1.14	129	7%
Plant-based chikin'	1.50	170	10%
Mollusks (clams, mussels)	2.00	227	13%
Plant-based cheese	2.00	227	13%
Certified sustainable fish	2.80	318	18%
Yogurt (6 oz.)	1.50	367	21%
Impossible™ plant-based meat	3.50	397	22%
Eggs	3.54	401	23%
Poultry	5.05	573	32%
Pork	6.87	779	44%
Shrimp	7.80	885	50%
Cheese (3.5 oz)	9.78	970	55%
Lamb	22.90	2597	146%
Beef	26.45	2999	169%

Green (Low): 0-25% DV Dietary Carbon Footprint

Yellow (Medium): 26-50 % DV Dietary Carbon Footprint

Red (High): > 50 % DV Dietary Carbon Foodprint

Source for DV Footprint: 1,780, calculated based on Willett et al. (2019) Planetary Health Diet

2. Once you have identified menu options that fit into the low and high carbon footprint criteria, add the icons to menu items at point of service, online, or on printed materials. You can find the icons here: <https://ucla.in/3KPZkbH>

Low Carbon Footprint



High Carbon Footprint

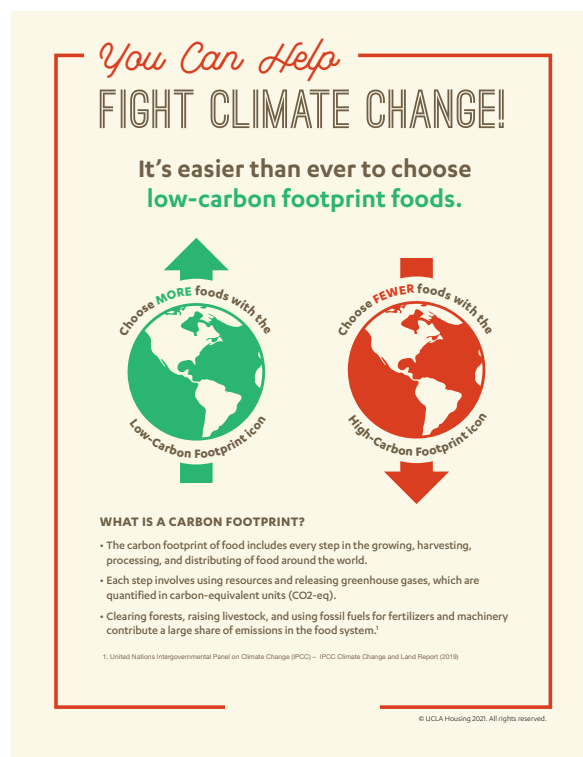
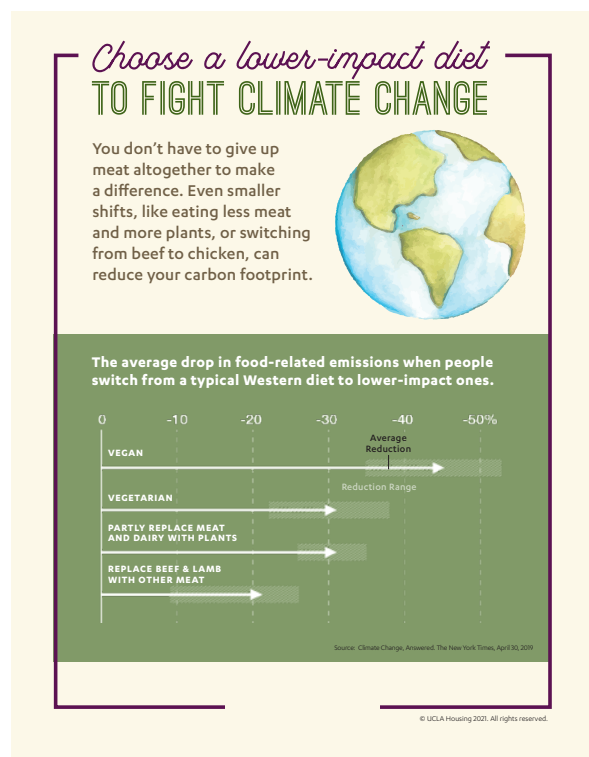
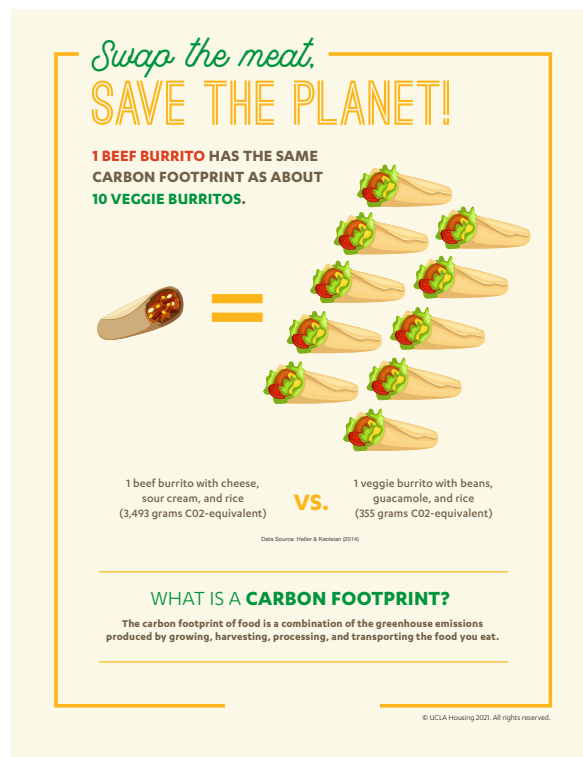
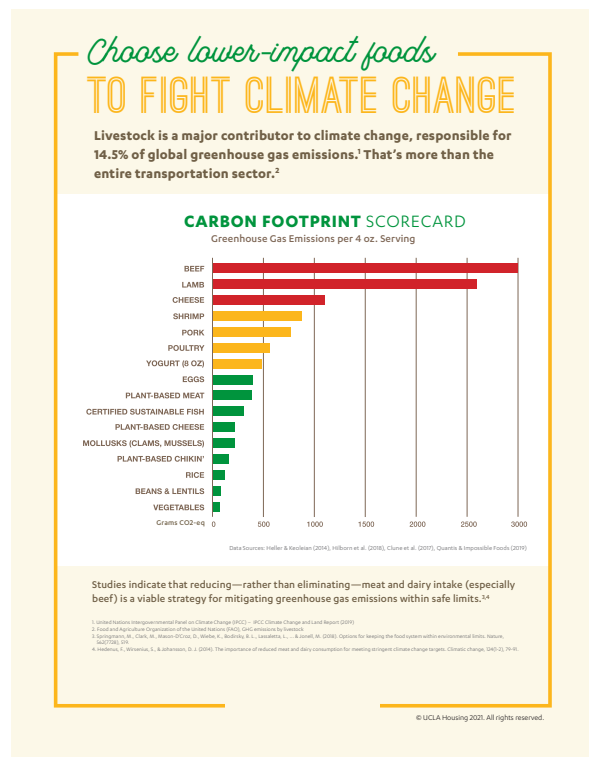


## STEP 2: Implement Social Marketing Tools

Select and implement the following tools for your social marketing campaign. Change signs every 2 to 3 weeks.

### 1. Posters (8½" by 11")

You can add your logo in the empty space at the bottom of each poster using MS Word or MS PowerPoint). You can find all the posters here: <https://ucla.in/3KPZkbH>

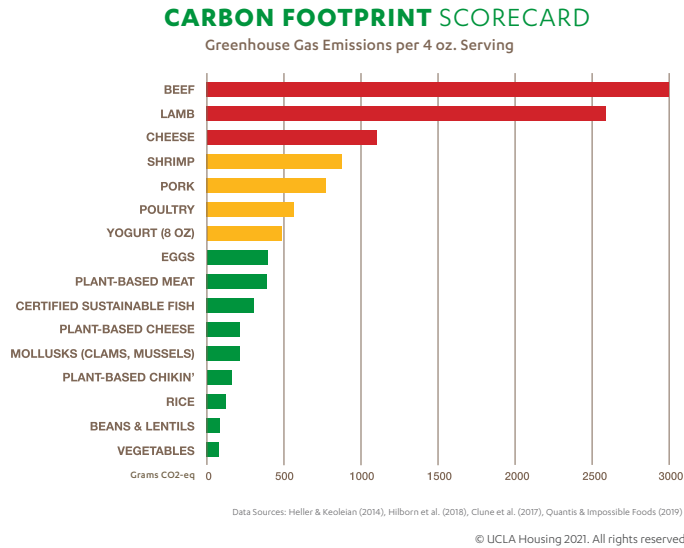


## 2. Graphics (PNG format with transparent background)

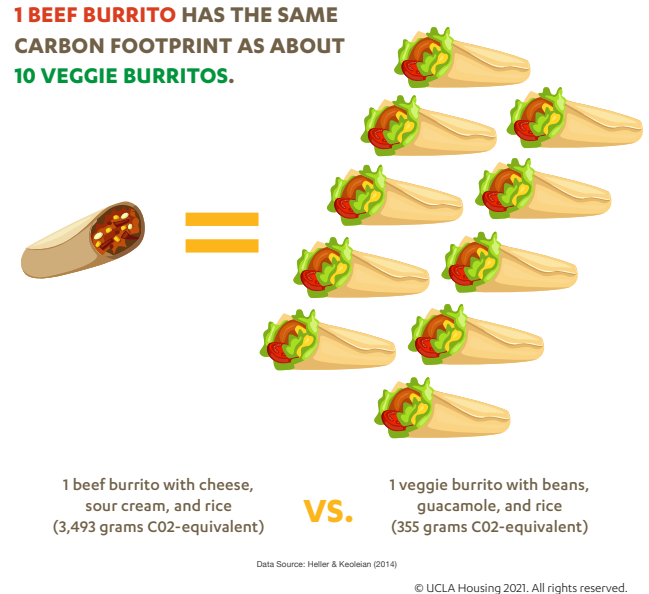
These graphics can be added to other pieces such as posters or websites, but must include the following wording:  
**Used with permission from UCLA Housing and UCLA Department of Community Health Sciences**

You can find all the graphics here: <https://ucla.in/3KPZkbH>

Graphic: Carbon Footprint Scorecard

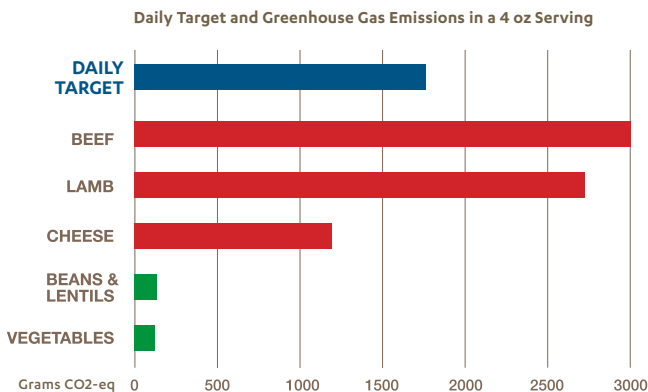


Graphic: Beef Burrito vs. Veggie Burrito



Graphic: Daily Target and Greenhouse Gas Emissions

**Just 4 oz. of beef or lamb puts you over your daily target for food-related greenhouse gas emissions!**



The food-related carbon footprint target of 1780 grams CO<sub>2</sub>-eq per day is calculated based on Willett et al. (2019) Planetary Health Diet.

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Graphic: Lentils vs. Beef

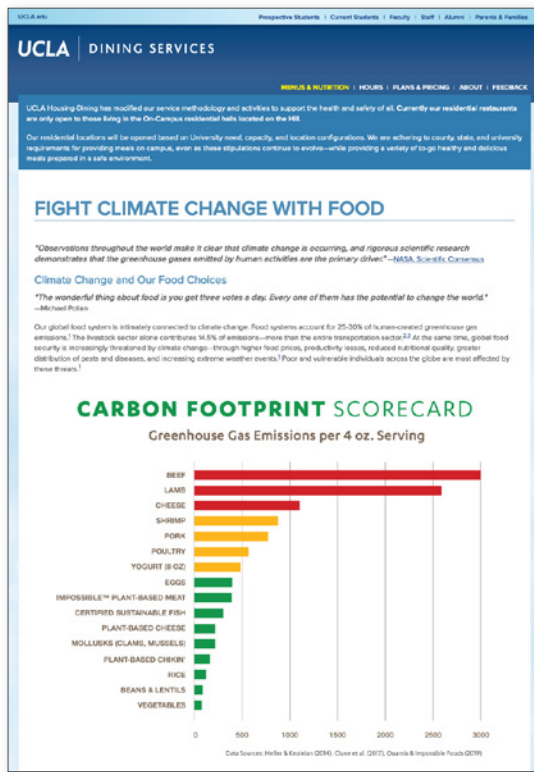
LENTILS 1 CUP	VS.	BEEF 4 OZ. PATTY
18 g	PROTEIN	21 g
0.1 g	SATURATED FAT	7.2 g
15.5 g	FIBER	0 g
6.6 mg	IRON	1.2 mg
230	CALORIES	250
177 g CO <sub>2</sub> -eq	CARBON FOOTPRINT	3,000 g CO <sub>2</sub> -eq

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## STEP 3: Create a webpage with background information

A webpage with information and graphics about food and climate change can support your campaign. See example here: <https://menu.dining.ucla.edu/Pages/CarbonFootprint>



**Minimize Your Carbon Footprint**

You can look for the green earth icon to identify low carbon footprint foods and the red earth icon to identify high carbon footprint foods at all UCLA Dining residential restaurants.

**Choose MORE foods with the Low-Carbon Footprint icon**

**Choose FEWER foods with the High-Carbon Footprint icon**

Measuring the carbon footprint of your food can make a meaningful impact on climate change and our planet. A carbon footprint includes every step in a food's life cycle—the growing, harvesting, processing, and distributing of food around the world. Each step involves using resources and releasing greenhouse gases, which are quantified in carbon equivalent units (CO<sub>2</sub>-eq). Growing, raising, harvesting, and using food fuels for fertilizers and machinery contribute a large share of emissions in the food system.

In general, animal-based foods have a larger carbon footprint than plant-based foods. That's because growing food to feed animals requires many more resources than raising food directly. Plus, ruminant animals like cows produce methane (primarily by burping) and nitrous oxide (from manure), greenhouse gases 28x and 260x more potent than CO<sub>2</sub>, respectively.<sup>13</sup>

Reducing your meat and dairy intake is an impactful way to minimize your carbon footprint—especially if you're a big meat eater. In fact, studies modeling a variety of climate change mitigation strategies indicate that shifts to diets with less meat and dairy—and much less beef—are crucial for mitigating greenhouse gas emissions within safe limits.<sup>14,15</sup>

**Criteria for Low and High Carbon Footprint Icons**

**Low Carbon Footprint** options are less than 25% of the daily carbon footprint target and include:

- Vegan items
- Or one of the following:
  - Vegetarian menu items with only one of the following:
    - 1.5 ounces or less of cheese
    - 2 whole eggs or less or 4 ounces or less of liquid eggs (1 large egg is about 2 ounces)
    - 5 ounces or less of yogurt
- Items with 8 ounces or less of mollusks (clams, mussels, oysters, scallops)
- Items with 8 ounces or less of certified sustainable fish. At UCLA, purchases of these fish species are certified sustainable and harvested using low carbon footprint methods (e.g., pond aquaculture):
  - Catfish
  - Clam
  - Cod
  - Salmon
  - Smoked salmon
  - Sole
  - Trout

**High Carbon Footprint** options are more than 50% of the daily carbon footprint target and include:

- Items containing beef, pork, or lamb

You can link to it from your online menu website. Add a link to your food and climate change website to your online menu. See example here: <https://menu.dining.ucla.edu/Menus/DeNeve>

**UCLA | DINING SERVICES**

**MENUS & NUTRITION | HOURS | PLANS & PRICING | ABOUT | FEEDBACK**

UCLA Housing-Dining has modified our service methodology and activities to support the health and safety of all. Currently our residential restaurants are only open to those living in the On-Campus residential halls located on the Hill.

Our residential locations will be opened based on University need, capacity, and location configurations. We are adhering to county, state, and university requirements for providing meals on campus, even as these stipulations continue to evolve—while providing a variety of to-go healthy and delicious meals prepared in a safe environment.

**Fight climate change with food! Choose more low-carbon and fewer high-carbon foods. [Learn more here.](#)**

**DE NEVE MENU FOR TODAY, FEBRUARY 7, 2022**

**Lunch**

Activity Level: 8%

All Residential Restaurants | Nutritive Analysis

**Flex Bar**

- Roasted Butternut Squash
- Roasted Cauliflower
- Spicy Peruvian Chicken
- Braised Mushrooms w/ Anaheim Peppers

**Dinner**

All Residential Restaurants | Nutritive Analysis

**Flex Bar**

- Grilled Tri-color Carrots w/ Peruvian Salsa Verde
- Roasted Butternut Squash
- Roasted Cauliflower
- Barbacoa de Borrigo (Braised Lamb)
- Spicy Peruvian Chicken
- Braised Mushrooms w/ Anaheim Peppers

Add a link to your food and climate change website to your online menu.

## STEP 4: Evaluation

You can work with restaurant managers to track menu item sales before and after implementing the intervention. See the original research article for more information: <https://doi.org/10.1086/720450>

## THE EVIDENCE



**Original research conducted in collaboration with:** Hannah Malan, PhD, UCLA Dining Services, UCLA Housing, UCLA Fielding School of Public Health, UCOP Global Food Initiative, and UCLA Department of Civil & Environmental Engineering. You can see the full research article here: <https://doi.org/10.1086/720450>

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