

RAICA Interfaith Summit

May 19, 2019

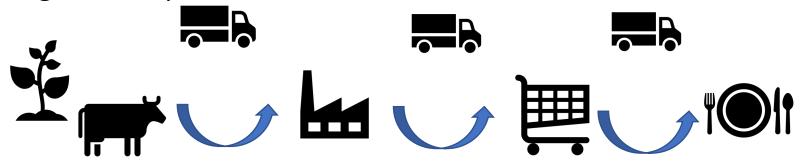
## How can faith congregations make meaningful impacts related to FOOD?



- 1. The choice of food that we purchase and serve
- 2. Reducing food that is left over or wasted
- 3. How we manage food scraps and food waste

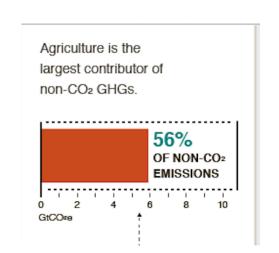
#### Food Value Chain Carbon Footprint

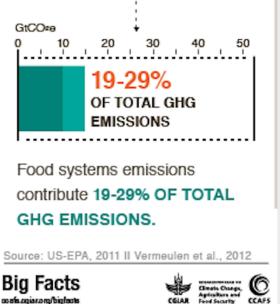
Before reaching our plates, food needs to be produced, processed, packaged, transported and distributed.



Along the way GHG impacts are generated from energy use, biological emissions and fertilizer emissions\*

(\*also pesticides, water animals and human labor)

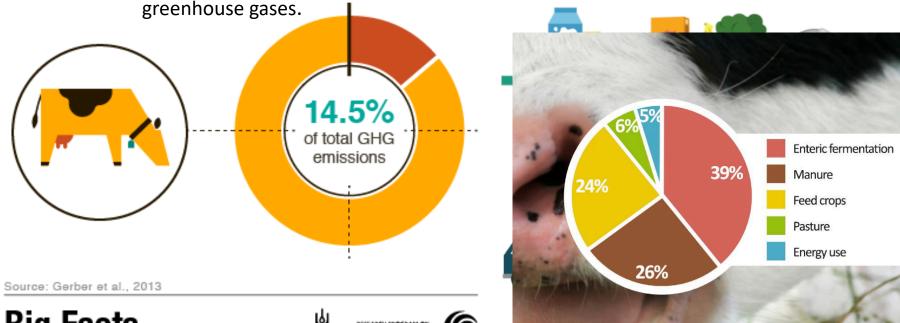




## Breaking down the food system carbon footprint

Livestock contributes 7,100 MtCO2e/year or 14.5% of total global

GHG emissions. If cattle were their own nation, they would be the world's third-largest emitter of



Big Facts cafs.cgiar.org/bigfacts

RESEARCH PROGRAM ON Climate Change, Agriculture and CCAI

....d States. Environ. Sci. Technol. 2008, 42 (10), 3508-3513.

(\*About 8% of total US GHG emissions, but this is mainly due to the overarching use of fossil fuels that impact our inventory) Data source: Gerber PJ, Steinfeld H, Henderson B, et al. Tackling Climate Change through Livestock – A Global Assessment of Emissions and Mitigation Opportunities. Rome: FAO; 2013.

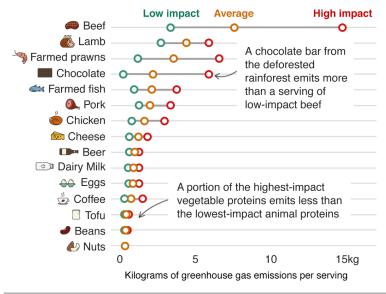
#### 1. The food we choose to purchase

- Project Drawdown\* researchers ranked shifting to a "plant-rich diet" as #4 of "the 100 most substantive, existing solutions to address climate change." (est. impact 66 Gigatons CO2e)
  - Health benefits of a plant-based diet and its importance to meeting the demand to feed a growing population have also been cited

Sources: <u>Project Drawdown</u>, the most comprehensive plan ever proposed to reverse global warming and the result of a qualified and diverse group of researchers from around the world identifying, researching, and modeling the 100 most substantive, existing solutions to address climate change.

Beef has the biggest carbon footprint - but the same food can have a range of impacts

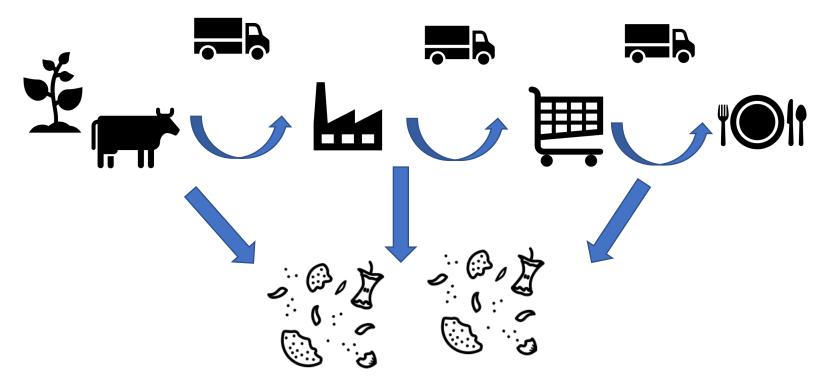
Kilograms of greenhouse gas emissions per serving



Some actions congregations have taken around food choices

- Special Meals:
  - "Green Iftar": Washington DC, London, Bahrain
  - Meatless Fridays: Catholic Herold, Arlington VA
  - Green Oneg: Kol Am, White Plains, NY
- Pledges: Try committing to serving meatless or vegan meals at least 1X/mo for a year
  - The Synagogue Vegan Challenge
     https://thesynagogueveganchallenge.weebly.com/
- Curriculum and Worship programming:
  - Ethical eating: food and environmental justice
  - https://www.uua.org/environment/eating
- Hazon: Food Policy Mini Gant
  - https://hazon.org/food-policy-minigrants-for-hazons-seal-of-sustainabilitysites/

About 1/3 of the food produced for human consumption is lost or wasted worldwide (FAO, 2011)

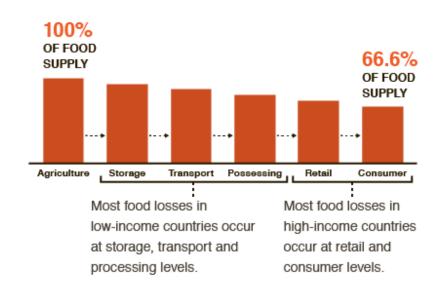


In the US, this is about 1.33 Billion pounds of food that (USDA, 2010) is lost or wasted

#### 2. Reduce Wasted food

Reducing food waste is #3 on the Project Drawdown solution list (est. impact 70 Giga tons CO2e)

- When food is wasted, all the energy, resources, and money that went into producing, processing, packaging, and transporting it are wasted too.
- The further down the supply chain the food gets before it is thrown out, the more resources are wasted to get it to that stage
- Reducing food waste can also contribute to reducing hunger and meeting global demand



Source: FAO, 2013



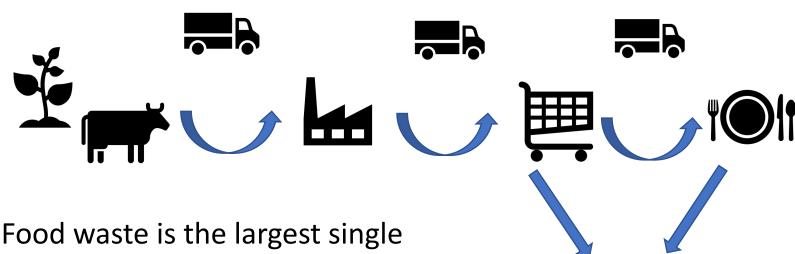




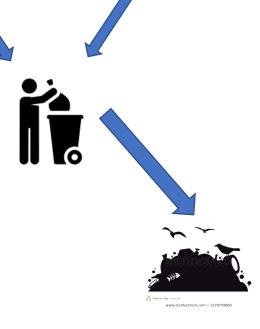
# Some Actions Congregations have taken to reduce wasted food

- Measure waste
  - Hazon's-"Psolet" bucket
- Track and eliminate
  - Recipe/ Catering Review
  - Conduct a Food Waste Audit
    - https://www.epa.gov/susta inable-managementfood/guide-conductingstudent-food-waste-auditsresource-schools
- Raise awareness
  - Participate in Wasted Food Weekend: September 6-8, 2019.
    - http://foodwasteweekend. org/
- Purchase "ugly food"

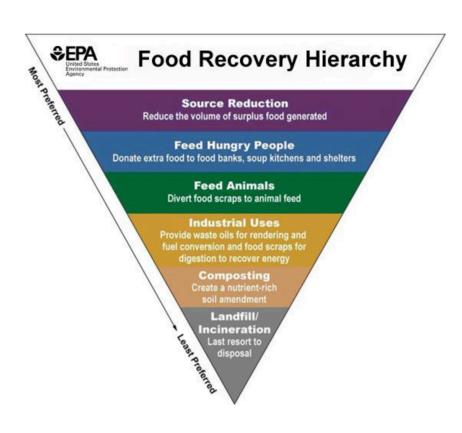
#### Disposal of food scraps and waste



- Food waste is the largest single material in our everyday trash, constituting 22 percent of discarded municipal solid waste.
- In a landfill Food Waste rapidly decays without the presence of oxygen to creating methane and some Nitrous oxide (GHGs 28X and 310X more powerful than CO2)



#### 3. Alternatives to landfilling



#### Some Actions Congregations have taken to avoid landfill

- Rescue and Diversion to those in need
  - Foodlink
- Composting
  - "Backyard" composting
    - Cornell Cooperative Extension
  - Rochester Community Composting, Impact Earth (tabling today)`
- Institutional Policy
  - E.g. Community rider for all area caterers to reduce waste and provide composting
- Advocacy
  - NYS Food Donation and Food Scrap Recycling Act (2019-2020) budget
  - City of Rochester Curbside Organics Collection



## Questions and Answers about Rescuing food

- What is Foodlink?
- Can all left overs be rescued?
- How does rescued food have to be handled to ensure that it is safe and usable?
- Am I or my congregation liable for any problems related to the food that I donate?
- Who gets the food?

## Food and your Congregation

Food has a special place in most religious practice making it a great place to integrate actions that you and your congregation can take to fight climate change

- Choose wisely
  - Many have considered food choices in relation to social justice, compassion and holiness
- Be efficient
  - Many have cautions against gluttony or waste
- Do more with what's left
  - Feeding the hungry and caring for creation are major callings for many of faith

#### Additional Resources

- Johns Hopkins Bloomberg School of Public Health: Center for a Livable Future: Worship materials, tookits, study guides, etc. from several faiths on ethical eating
  - https://www.jhsph.edu/research/centers-andinstitutes/johns-hopkins-center-for-a-livablefuture/projects/BFFP/toolkits\_guides\_ideas/worshop/index.h tml
- Foodwasteweekend.org: Videos, sermons and other resources from various faiths regarding food waste
  - http://foodwasteweekend.org/
- Jackie Ebner
  - Jackie@resilienceresearchgroup.com

### Back up

## The potential **DRAWDOWN**

**y** in f ⊙

email sign up

donate

Q

#### Solutions by Rank

| Rank | Solution                  | Sector                 |          | TOTAL<br>MOSPHERIC<br>CO2-EQ<br>UCTION (GT) | NET COST<br>(BILLIONS US \$) | SAVINGS (BILLIONS<br>US \$) |
|------|---------------------------|------------------------|----------|---|------------------------------|-----------------------------|
| 1    | Refrigerant Management    | Materials              | 89.74    |   | N/A                          | \$-902.77                   |
| 2    | Wind Turbines (Onshore)   | Electricity Generation | 84.60    |   | \$1,225.37                   | \$7,425.00                  |
| 3    | Reduced Food Waste        | Food                   | 70.53    |   | N/A                          | N/A                         |
| 4    | Plant-Rich Diet           | Food                   |          | 66.11                                       | N/A                          | N/A                         |
| 5    | Tropical Forests          | Landlise               |          | 61.23                                       | N/A                          | N/A                         |
| 6    | Educating Girls           | Women and Girls        |          | 51.48                                       | N/A                          | N/A                         |
| 7    | Family Planning           | Women and Girls        | 51.48    |   | N/A                          | N/A                         |
| 58   | Landfill Methane          | Buildings and Cit      | es 2.50  |   | \$-1.82                      | \$67.57                     |
| 59   | Bike Infrastructure       | Buildings and Cit      | ies 2.31 |   | \$-2,026.97                  | \$400.47                    |
| 60   | Composting                | Food                   |          | 2.28  | \$-63.72                     | \$-60.82                    |
| 61   | Smart Glass               | Buildings and Cities   |          | 2.19  | \$932.30                     | \$325.10                    |
| 62   | Women Smallholders        | Women and Girls        | 2.06     |   | N/A                          | \$87.60                     |
| 63   | Telepresence              | Transport              | 1.9      |   | \$127.72                     | \$1,310.59                  |
| 64   | Methane Digesters (Small) | Electricity Generation |          | 1.90  | \$15.50                      | \$13.90                     |

#### Which foods are really the worst

- Clear winners across all measures, including farmed shellfish and mollusks, and capture fisheries such as sardines, mackerel, and herring. Other capture fish choices with relatively low impact are whitefish like pollock, hake, and the cod family. Farmed salmon also performed well.
- Livestock generally used less electricity than farmed fish because they need to keep water circulating
- Catfish aquaculture and beef produce about 20 times more greenhouse gases than farmed mollusks, small capture fisheries, farmed salmon, and chicken.
- Mollusk aquaculture—such as oysters, mussels, and scallops—actually absorb excess nutrients
  that are harmful to ecosystems. In contrast, livestock beef production rated poorly in this measure,
  and capture fisheries consistently scored better than aquaculture and livestock because no
  fertilizer is used.
- Because livestock emit methane in their manure, they performed poorly in the acid rain category.
   Farmed mollusks again performed the best, with small capture fisheries and salmon aquaculture close behind.
- For capture fisheries, fuel to power fishing boats is the biggest factor, and differences in fuel use created a large range of performance in the greenhouse gas category. Using a purse sein net to catch small schooling fish like herring and anchovy uses the least fuel and, perhaps surprisingly, pot fisheries for lobster use a great deal of fuel and thus have a high impact per unit of protein produced. Dragging nets through water, known as trawling, is quite variable and the impact appears to be related to the abundance of the fish. Healthy stocks take less fuel to capture.
- When compared to other studies of vegetarian and vegan diets, a selective diet of aquaculture and wild capture fisheries has a lower environmental impact than either of the plant-based diets.

University of Washington researchers compared 148 studies of food impact based upon energy use, greenhouse gas emissions, potential to contribute excess nutrients—such as fertilizer—to the environment, and the potential to emit substances that contribute to acid rain

Researchers in Sweden examined the possible steps that people can take to help tackle the climate crisis. Although a lot of resulting news coverage focused on the most effective action (having one fewer kid), the real takeaway is that individual actions still matter. A lot.

