FOOD SYSTEMS CONSIDERATIONS FOR RI ACT ON CLIMATE

EC4 ADVISORY BOARD MEETING • APRIL 27, 2022

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Nessa Richman | Network Director, RI Food Policy Council
OUTLINE

- Introductions
- State food strategy goals
- Food system GHG emissions
- Opportunities for mitigation & adaptation
Food Flows: Downscaled to All Counties
Agricultural Product (SCTG 3) Flows Into New England

New England: 8.6 billion pounds

Key
- 53.9% New England (self loops and interstate transfers)
- 30.6% Northeast
- 9.1% Midwest
- 3.2% Southeast
- 2.6% West Coast
- 0.8% Inland West
- 0.1% Southwest

Top originating state from region

Standard Classification of Transported Goods (SCTG) 3: Agricultural products including fresh, chilled, or dried vegetables; fruits and nuts; oil seeds; bulbs; live plants; seeds; mushroom spawn; flowers; cotton; sugar; (excludes animal feed, cereal grains, and forage products).

Major Climate Risks by US Agricultural Production Regions

FOOD STRATEGY PRIORITIES FOR 2022

In 2017, RI launched its first-ever statewide food strategy envisioning a sustainable, equitable food system that is uniquely Rhode Island; one that build on our traditions, strengths, and history while encouraging innovation.
# FOOD SYSTEM x CLIMATE

## Gross GHG Emissions by Economic Sector in 2018

<table>
<thead>
<tr>
<th>Sector</th>
<th>2018 Emissions</th>
<th>Percent Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation</td>
<td>4.45 MMTCO2e</td>
<td>35.0%</td>
</tr>
<tr>
<td>Electricity Consumption</td>
<td>3.34 MMTCO2e</td>
<td>26.4%</td>
</tr>
<tr>
<td>Residential Heating</td>
<td>2.32 MMTCO2e</td>
<td>18.3%</td>
</tr>
<tr>
<td>Industry</td>
<td>1.19 MMTCO2e</td>
<td>9.4%</td>
</tr>
<tr>
<td>Commercial Heating</td>
<td>0.98 MMTCO2e</td>
<td>7.7%</td>
</tr>
<tr>
<td>Waste</td>
<td>0.22 MMTCO2e</td>
<td>1.7%</td>
</tr>
<tr>
<td>Natural Gas Distribution</td>
<td>0.14 MMTCO2e</td>
<td>1.1%</td>
</tr>
<tr>
<td>Agriculture</td>
<td>0.05 MMTCO2e</td>
<td>0.4%</td>
</tr>
</tbody>
</table>

Total 2018 Gross GHG Emissions: 12.70 million metric tons of CO₂e

## 1990 - 2018 Change

<table>
<thead>
<tr>
<th>Sector</th>
<th>Change in MMTCO2e</th>
<th>Percent Change</th>
<th>Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation</td>
<td>-0.52</td>
<td>-10.4%</td>
<td>↓</td>
</tr>
<tr>
<td>Electricity Consumption</td>
<td>0.52</td>
<td>18.5%</td>
<td>↑</td>
</tr>
<tr>
<td>Residential Heating</td>
<td>-0.05</td>
<td>-2.0%</td>
<td>↓</td>
</tr>
<tr>
<td>Industrial Heating &amp; Processes</td>
<td>0.38</td>
<td>46.5%</td>
<td>↑</td>
</tr>
<tr>
<td>Commercial Heating</td>
<td>-0.17</td>
<td>-14.8%</td>
<td>↓</td>
</tr>
<tr>
<td>Other</td>
<td>-0.24</td>
<td>-36.9%</td>
<td>↓</td>
</tr>
<tr>
<td>Total</td>
<td>0.22</td>
<td>1.8%</td>
<td>↑</td>
</tr>
</tbody>
</table>

Statewide Net GHG Accretions (1990-2018): 1.8%

**Source:** Neufeld, Visual Capitalist (2020)
FOOD SYSTEMS ARE RESPONSIBLE FOR $\frac{1}{3}$ OF GLOBAL GHG EMISSIONS

37% OF US FOOD EMISSIONS COME FROM ENERGY (PACKAGING AND TRANSPORTATION)

GHG Emissions from RI Food Waste?

20% FOOD WASTE

322,290 TONS

80% SOLID WASTE

TONS OF COMPOSTABLE WASTE GOING INTO THE CENTRAL RI LANDFILL (2017)

Earth Care Farm compost facility - Charlestown, RI
CLIMATE MITIGATION STRATEGIES VIA FOOD SYSTEM

PROJECT DRAWDOWN
80 SOLUTIONS

CO2-EQ: 1,035 GT
COST: $29.6T
SAVINGS: $74.4T

Ranked by potential emissions reduction (CO2eq GT), 2020-2050, as modeled in Project Drawdown’s Plausible Scenario (2017).
THE GOOD NEWS:
AGRICULTURAL LAND AND
PRODUCTIVE OCEANS
REPRESENT HUGE CARBON SINKS
5 CORE PRINCIPLES OF REGENERATIVE AGRICULTURE

- Minimize soil disturbance
- Keep the soil covered
- Maximize crop diversity
- Maintain living root year-round
- Integrate livestock
RI AGRICULTURE & AQUACULTURE

Aquaculture Farms & Acreage Under Lease

- 55,000 acres of farmland
- 1,200+ crop farms
- 347 acres under aquaculture production

source: CMRC 2020, RIFPC, USDA Census of Agriculture (multiple years)
American Farmland Trust estimates that...

Rhode Island could reduce 1,800 to 4,200 tonnes CO2e per year by adopting conservation practices on existing croplands which equates to planting 30,000 - 70,000 new trees for a decade.

A win-win scenario that...

➔ improves long-term agricultural productivity and food security
➔ mitigates GHG emissions
➔ improves water quality

POTENTIAL FOR CONSERVATION PRACTICES TO REDUCE GHG EMISSIONS IN RI
$16,000/ACRE
HIGHEST COST OF FARMLAND IN THE NATION
FOOD SYSTEMS IN STATE CLIMATE PLANS

- Increase the amount of food consumed in Maine from state food producers from 10% to 20% by 2025 and 30% by 2030 through local food system development
- Launch the Maine Seafood Business Council by 2022
A CLIMATE-SMART FOOD SYSTEM CONSIDERS...

- How we grow and distribute food
- Leverages ocean biomass as carbon sinks
- How and what we eat
- How we dispose of food waste and wasted food

OUR ASK:
- Include a food systems perspective on taskforce
- Include food systems in State climate plans
QUESTIONS?
Connect with us

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