The Fight Against Plastic Pollution

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The Fight Against Plastic Pollution

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The Fight Against Plastic Pollution

Agenda:

- Plastics Pollution Overview (Kevin)
- Local Successes (Kate)
- State House Perspective (Rep. McEntee)
- Question and Answer

Problems with Plastics

- Background: the Plastics "Life Cycle"
- Plastics and Environmental Justice
- Plastics and Climate
- What Can We Do?



The Plastics Life Cycle



What are Plastics?

- 99% of plastics are derived from fracked gas or crude oil
- Plastics are cheap because they are subsidized by the fossil fuel industry
- Plastics are often combined with additives to make them more flexible, more durable, fireproof, or a certain color

Plastics = Fossil Fuels



The Plastics Life Cycle







Extraction

Consumption

Environment



Refinement



Waste



Plastics Pollute at Every Stage: Extraction

Plastics Pollute at Every Stage: Extraction

- 170+ toxic chemicals in fracking fluid, including benzene, toluene, ethylbenzene, and xylene
- These chemicals cause cancer and liver, kidney, reproductive, and/or development toxicity
- 7,000+ pipeline leaks in last ten years in U.S.





Plastics Pollute at Every Stage: Extraction



 Long before a plastic has been made, its raw materials have already polluted our air, contaminated drinking water, and damaged our climate



Plastics Pollute at Every Stage: Refinement

Plastics Pollute at Every Stage: Refinement



- Refining fossil fuels into plastic resins releases hazardous air pollutants like 1,3-butadiene, benzene, styrene, and toluene
- Pollutants can be colorless and odorless
- Linked to cancers and neurological effects



Plastics Pollute at Every Stage:

Consumption

Plastics Pollute at Every Stage: Consumption



- We ingest micro- and nano-particles shed by plastic food packaging Chemical additives in plastic packaging leach into food
- 175+ known endocrine disrupters, carcinogens, and other hazardous chemicals used in plastic food

packaging







62,000+ tons/year in the Johnston landfill each year

Source: 2015 Rhode Island Waste Characterization Study



8,000 tons/year processed for recycling



Up to 44,000 tons of the yearly plastic total in Rhode Island are single-use plastics

Source: 2015 Rhode Island Waste Characterization Study





 Bags and film = 26,000+ tons/year (>5% of all waste)



PET bottles = 4,700+ tons/year

Source: 2015 Rhode Island Waste Characterization Study



Styrofoam = 4,000+ tons/year

- Incinerating, gasifying, and pyrolyzing plastic releases dioxins, furans, mercury, PCBs, and other toxics
- These pollutants are linked to cancers, neurological damage, and endocrine disruptions

Don't Burn Plastic!

Plastics Pollute at Every Stage: Plastic in Our Environment







Plastics Pollute at Every Stage: Plastic in Our Environment

Rhode Island's 2018 International Coastal Cleanup:

- 43,281 small pieces of plastic and foam
- 13,848 plastic plates, utensils, take-out containers, wrappers
- 7,345 plastic bottles
- 5,576 plastic bags
- 119,975 pieces of plastic (77% of all items collected)

Source: Save the Bay 2018 International Coastal Cleanup Rhode Island Report















Plastics and Environmental Justice



Plastics and Environmental Justice

- Nationwide, people of color are 75% more likely to live near polluting facilities like petrochemical plants¹
- 80% of waste incinerators in the U.S. are located in environmental justice communities²



¹Source: NAACP & CATF, Fumes Across the Fenceline ²Source: The New School, U.S. Municipal Solid Waste Incinerators: An Industry in Decline



Plastics and Environmental Justice

- "Cancer alley" in Louisiana is home to more than 200 chemical plants
- More than 30 petrochemical plants—including the world's largest polystyrene facility—are located near St. Gabriel parish, which has a 29% poverty rate and an average income half the national average

Source: ProPublica, Welcome to "Cancer Alley"





Plastics and Climate



Plastics Production is Growing



Global Plastics Production:

1950 = 2,000,000 metric tons

2015 = 380,000,000 metric tons

2050 = 1,800,000,000 metric tons

Source: Azouly, Plastic & Health: The Hidden Costs of a Plastic Planet



Plastics Production is Growing

- The U.S. petrochemicals and plastics industries plan to spend more than <u>\$200</u>
 <u>billion</u> on factories, pipelines, and other infrastructure by 2025
- This includes 12 new petrochemical facilities in "cancer alley" and \$90 billion worth of facilities in the Northeast





Plastics and Climate



Source: Hamilton, Plastic & Climate: The Hidden Costs of a Plastic Planet

If these trends continue, emissions from plastics production and incineration will consume 10-13% of the planet's remaining carbon budget

Plastics and Climate

Burning plastics makes the problem worse!

- Gasification, pyrolysis, and incineration are not solutions to the plastics problem
- Burning plastics:
 - Releases greenhouse gases
 - Emits dangerous pollutants like nitrogen oxides, mercury, lead, and dioxins
 - Does nothing to stop the production of new plastics



What Can We Do?



We Have the Tools to Fix This

Better recycling is a start, but we cannot recycle our way out of the plastics crisis

The path forward:

- Single-use plastics bans
- Deposit-return system (bottle bill)
- Extended producer responsibility for packaging
- Reusable and refillable containers and systems



Local Successes in the **Fight Against Plastics** Polution



MACANUDO

WHY DO YOU THINK THE

50

SEA 15 50 ANGRY ?

BY LINIERS

ONE WORD: PLASTICS.









Perspective on **Plastics from the State House**

Plastics Bills in the State House

Plastic Bags:

- S-2003 Sub A (Senate President Ruggiero) Passed Senate unanimously!
- H-7306 (Representative McEntee) Polystyrene Food Containers:
- H-7164 (Representative Bennett)
- S-2636 (Senator Miller)

Plastic Straws:

- H-7163 (Representative Bennett) Bottle Bill:
- H-7611 (Representative McEntee)
- S-2513 (Senator McKenney) Vendor Plastic Reduction Incentive:
- H-7872 (Representative Kazarian)





Discussion