Thinking Beyond Plastic:

Policy Solutions for a Growing Environmental Issue

ENVIRONMENT OREGON
Protecting our air, water and open space.

SURFRIDER FOUNDATION

OCEAN

Photo: Charlie Plybon

Photo: Raed Mansour via Wikimedia Commons

PLASTICS


9% recycled
12% incinerated
79% landfilled and in the natural environment

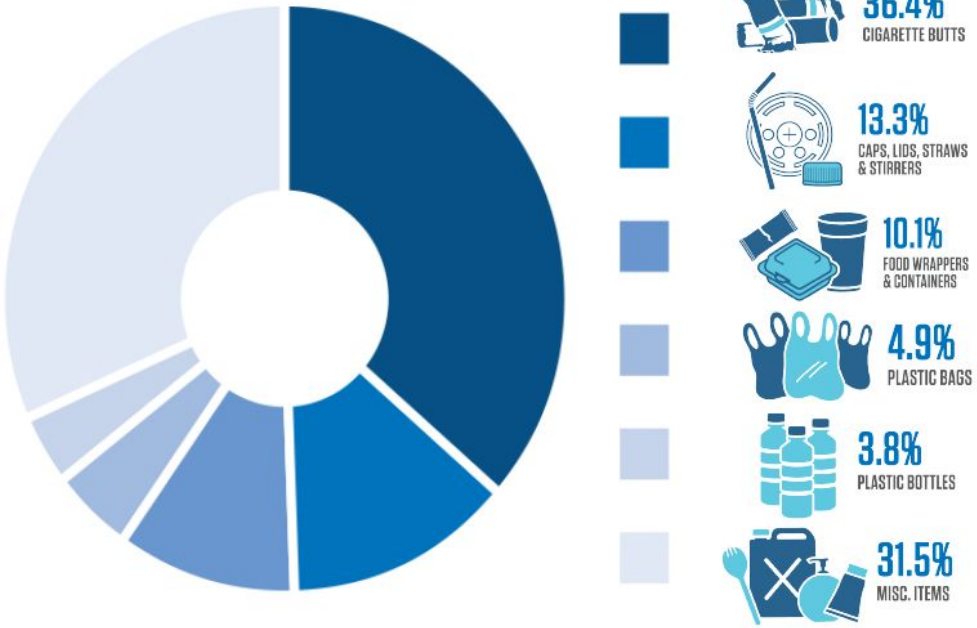
MARINE IMPACTS

Photo: Amelia Vaughan, Beverly Beach State Park

Photo: USFWS

Photo: Kristal Talbot

THE TOP 5 ITEMS FOUND ON BEACH CLEANUPS IN OREGON



*Source - Surfrider and SOLVE combined beach cleanup data 2017 (200+ cleanups)

FRESHWATER IMPACTS

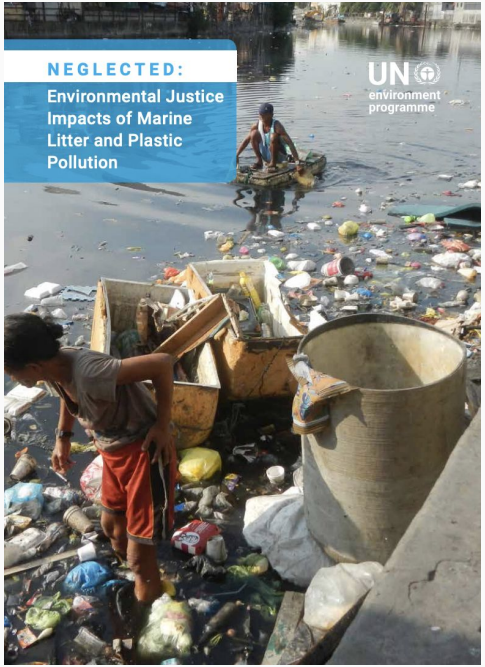
Photos: Willamette Riverkeeper

MICROPLASTICS

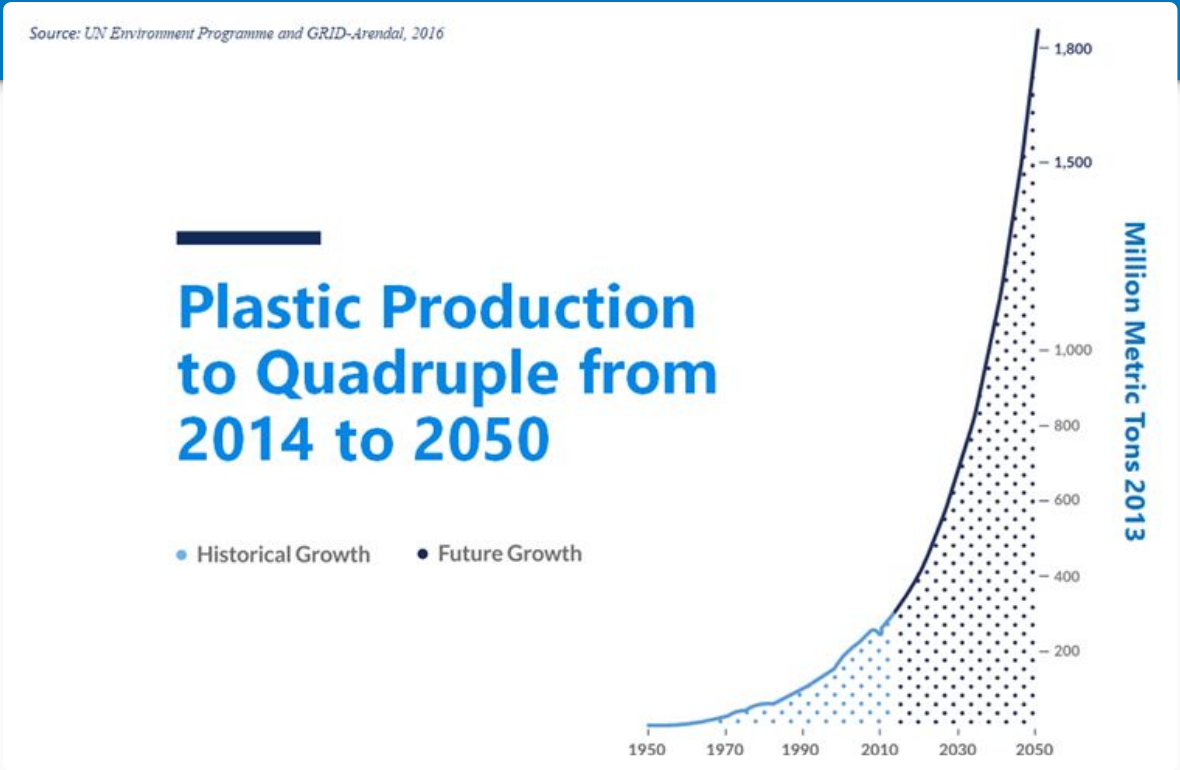
Photo: Shutterstock

Photo: Surfrider

PUBLIC HEALTH IMPACTS



PLASTIC PRODUCTION IS ON THE RISE



Expanded Polystyrene

- 7 states banned various forms of polystyrene foam
  - Washington, Maryland, New York, Virginia, Massachusetts, Colorado, New Jersey
- 8 local jurisdictions in Oregon regulate polystyrene foam
- World Health Organization classifies styrene as a “probable carcinogen”

Photo: Coos Bay Surfrider

Presentation for Oregon House Energy & Environment Committee

Chemical Recycling and the Plastic Problem

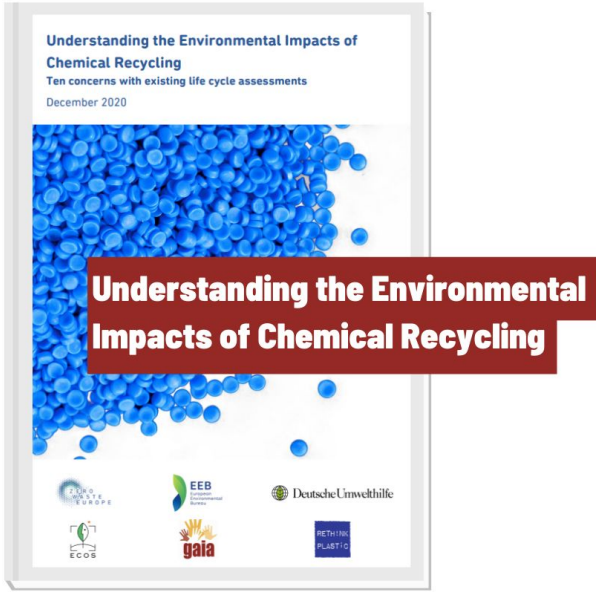
24 May 2021

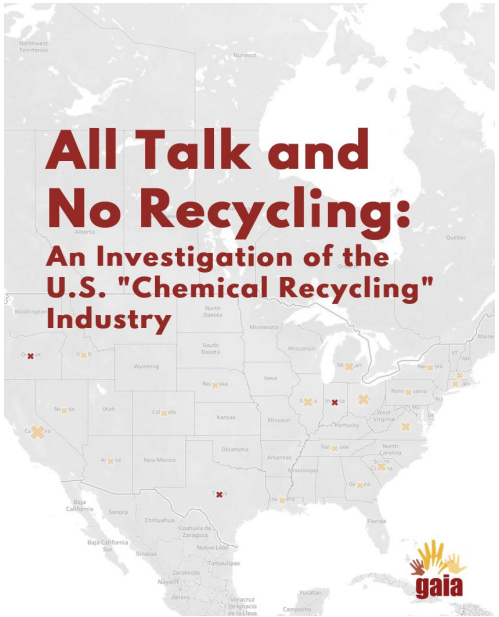
Dr. Neil Tangri
Science and Policy Director, GAIA
neil@no-burn.org

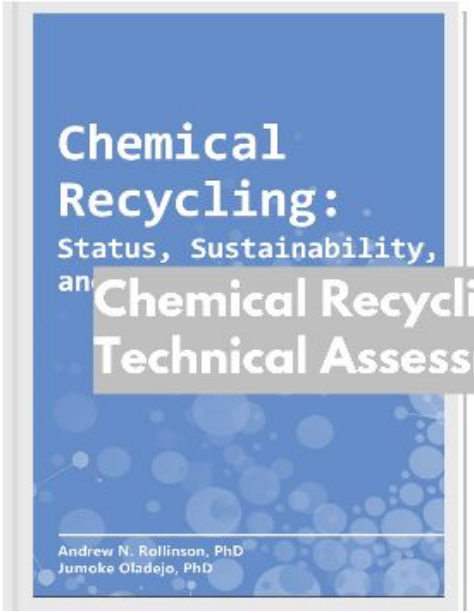
GAIA: A global network of 800 organizations in 90 countries working for a just, toxic-free, zero waste world.

www.no-burn.org

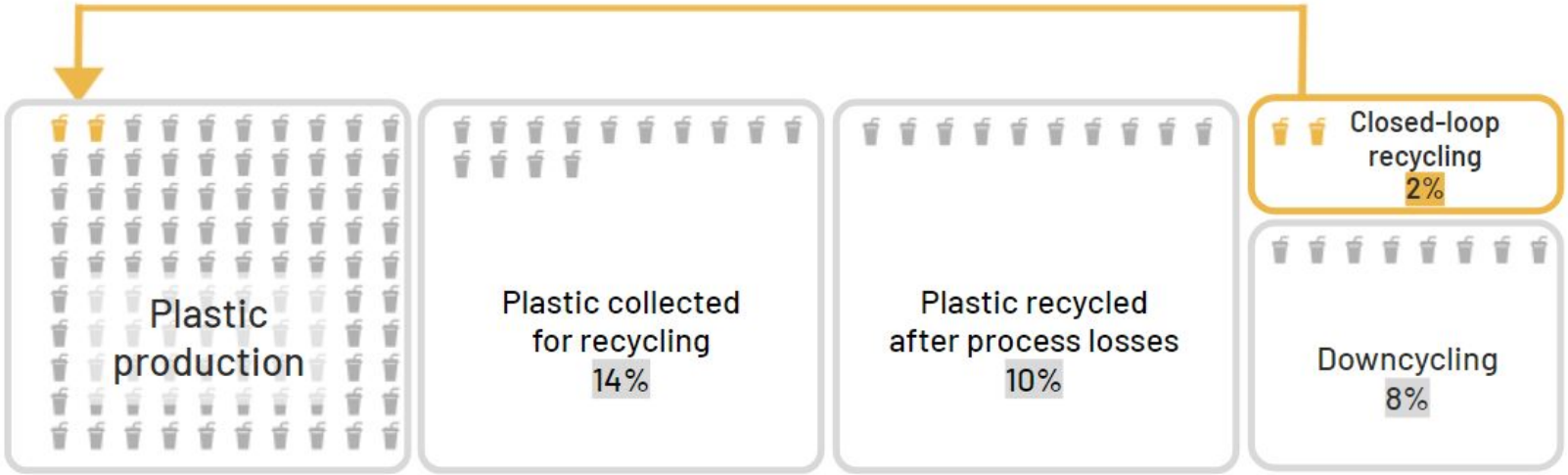
Recent publications on chemical recycling







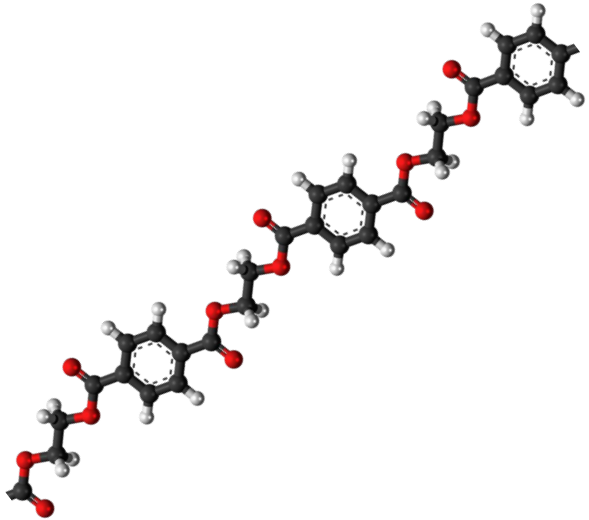
We have a problem with plastic recycling

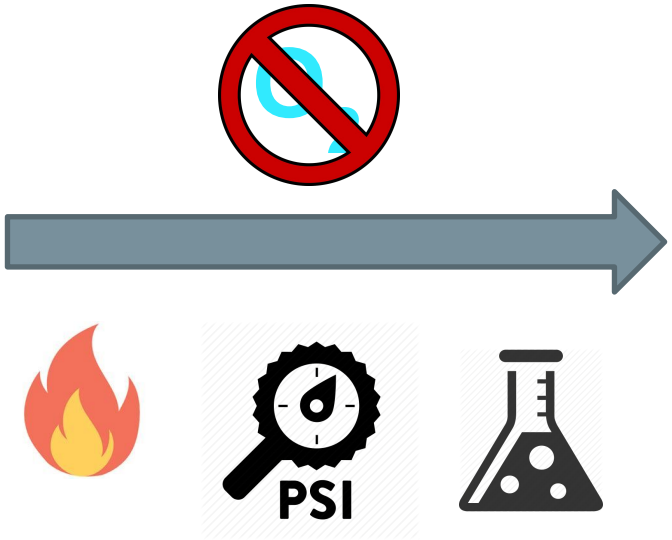


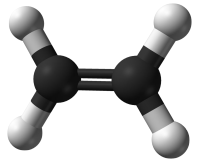
Source: Ellen MacArthur Foundation (2016). A New Plastic Economy.

Chemical recycling - what is it?

Chemical Recycling breaks plastic down into its chemical components (monomers)

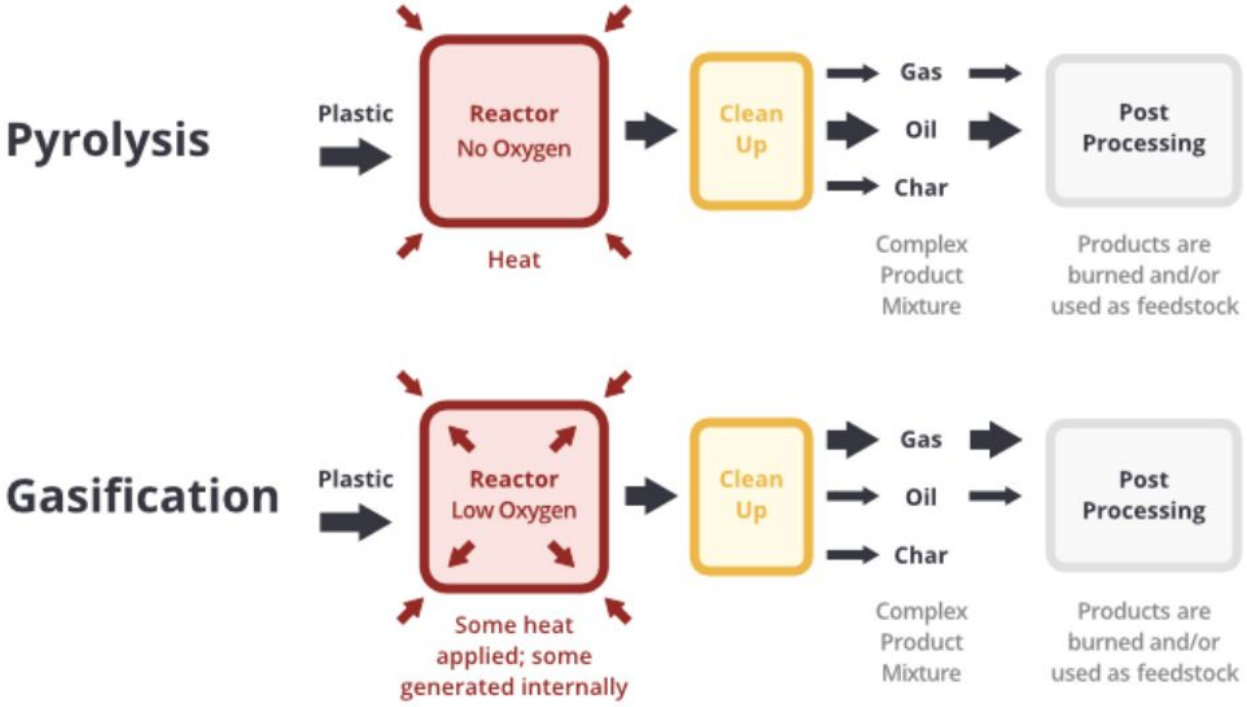




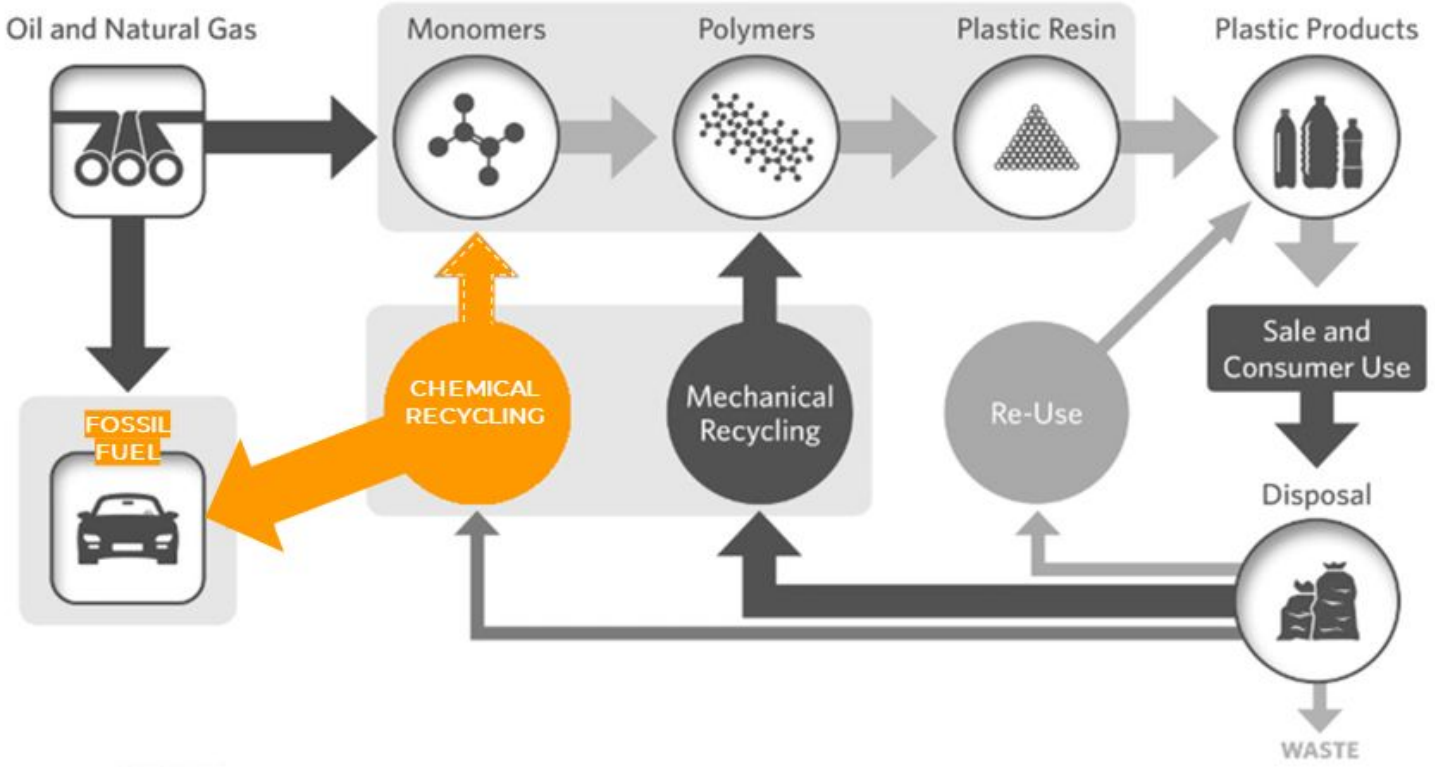


Additives & Contaminants

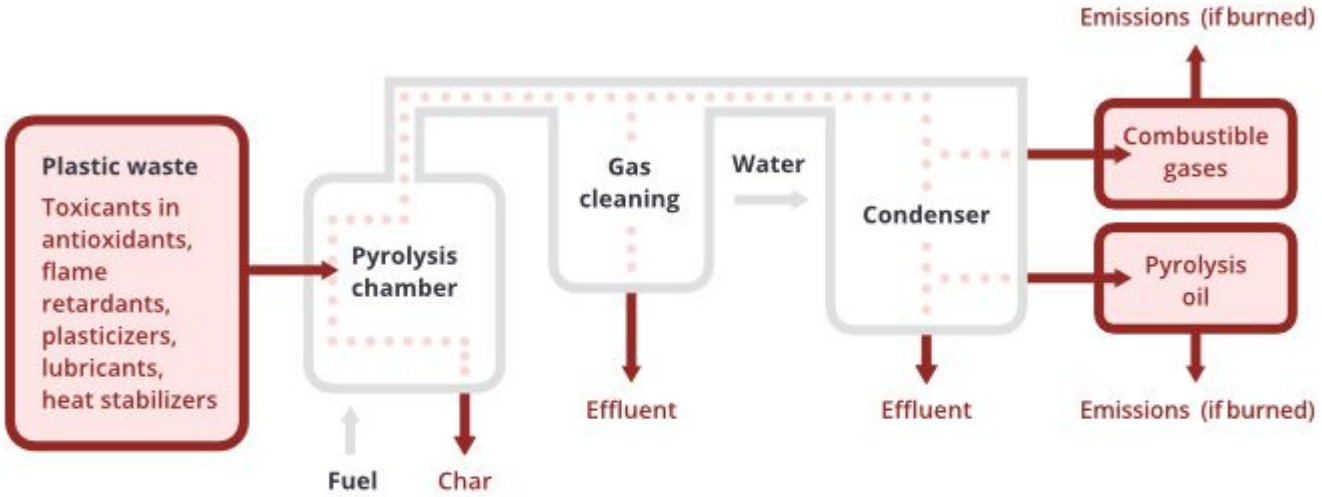
Chemical recycling technology types



Recycling or plastic-to-fuel?



Toxics in, toxics out

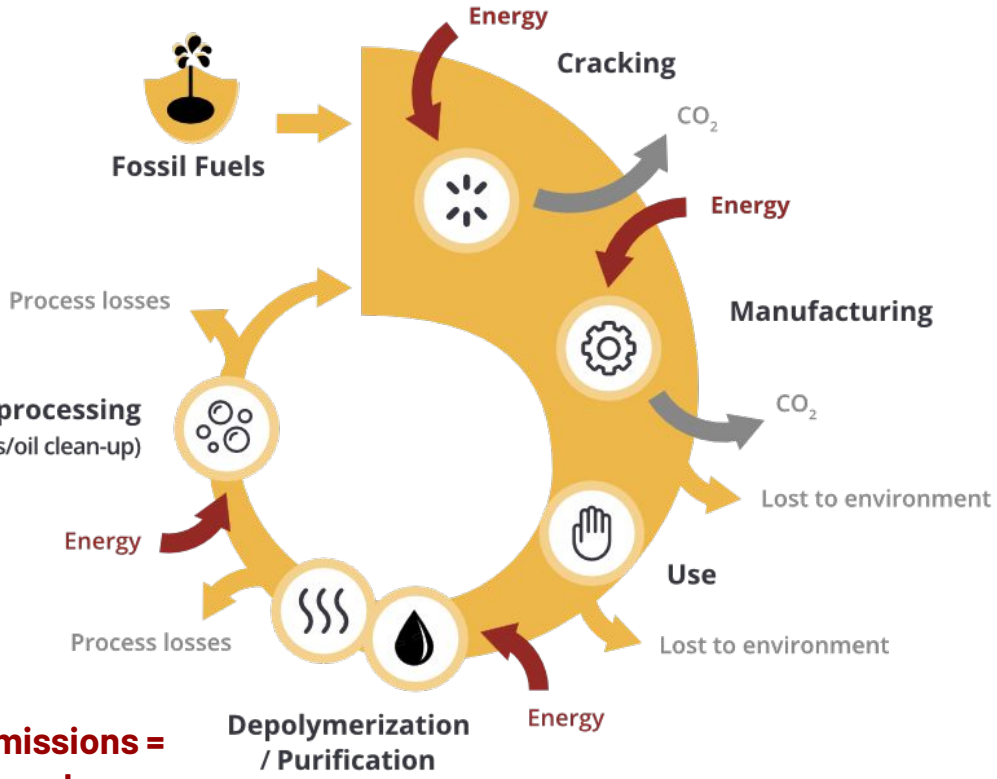


Toxicants include: phthalates, BPA, poly-brominated diphenyl ethers, toxic brominated compounds and poly-cyclic aromatic hydrocarbons (PAH), nitrated PAH (N-PAH), oxygenated PAH (O-PAH), and N/S/O – heterocyclic PAHs, As, Sb, Br, Zn, Cu, Hg, Cd, Dioxin, HCN

Chemical recycling is not circular

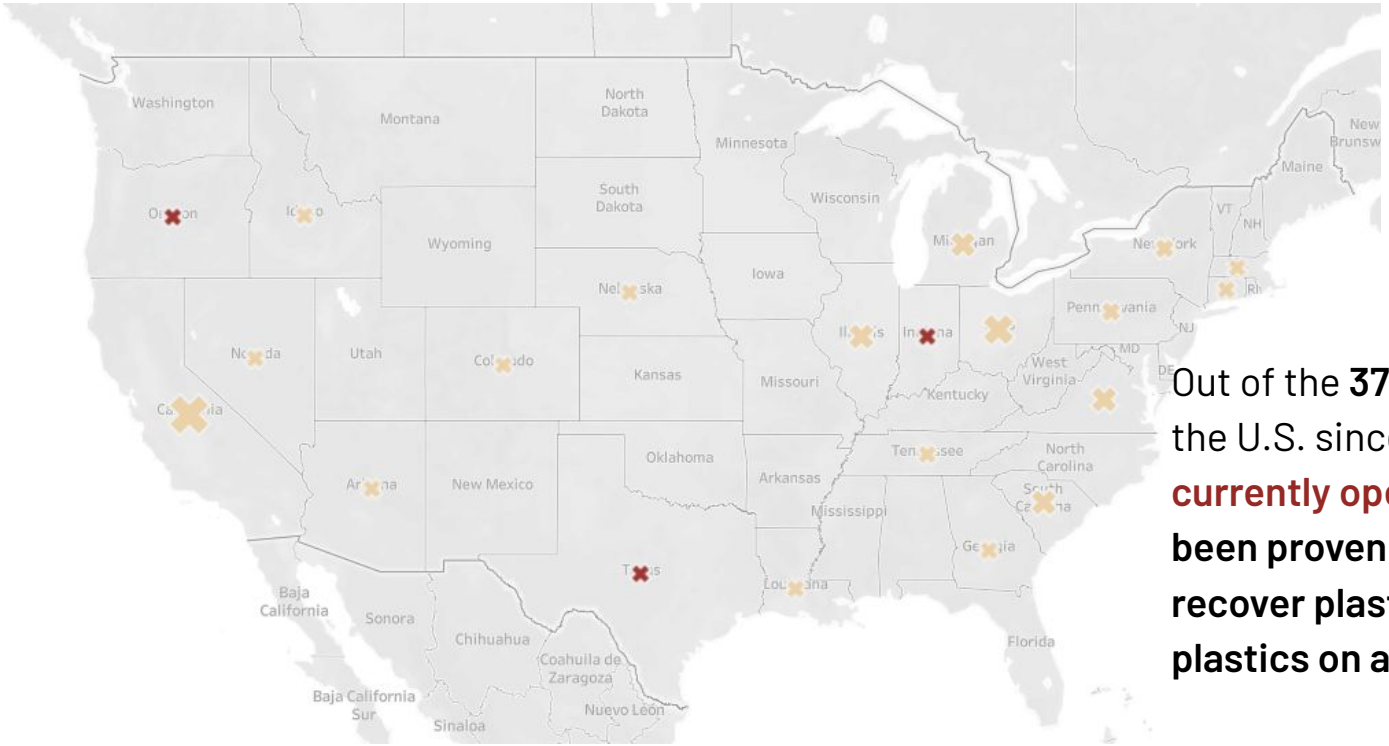
High energy intensity
High carbon emissions
Little plastic makes the round trip

CO_2 emissions = 40% of input



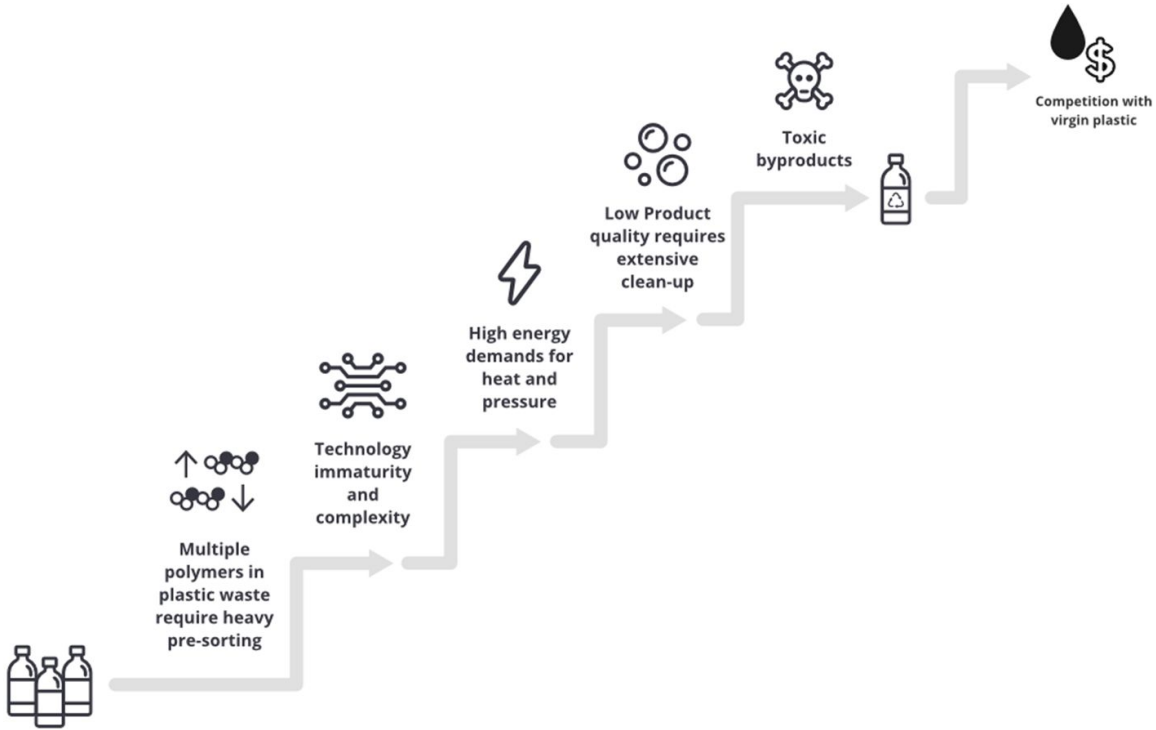
CO_2 emissions = 2.5 x input

Proposed & existing chemical recycling facilities

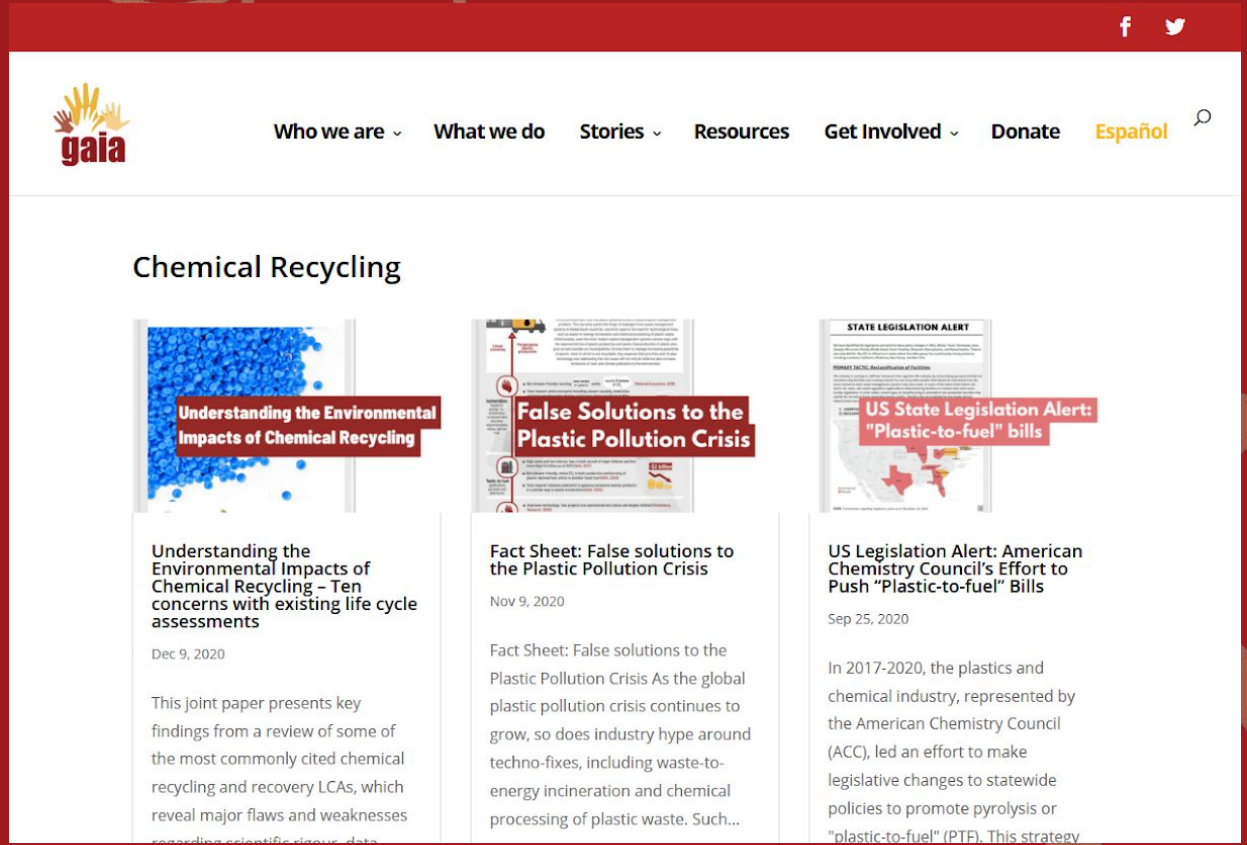


Out of the **37 facilities** announced in the U.S. since 2000, **only 3 are currently operational** and **none have been proven to successfully recover plastic to make new plastics on a commercial scale.**

Summary: Multiple barriers to sustainability

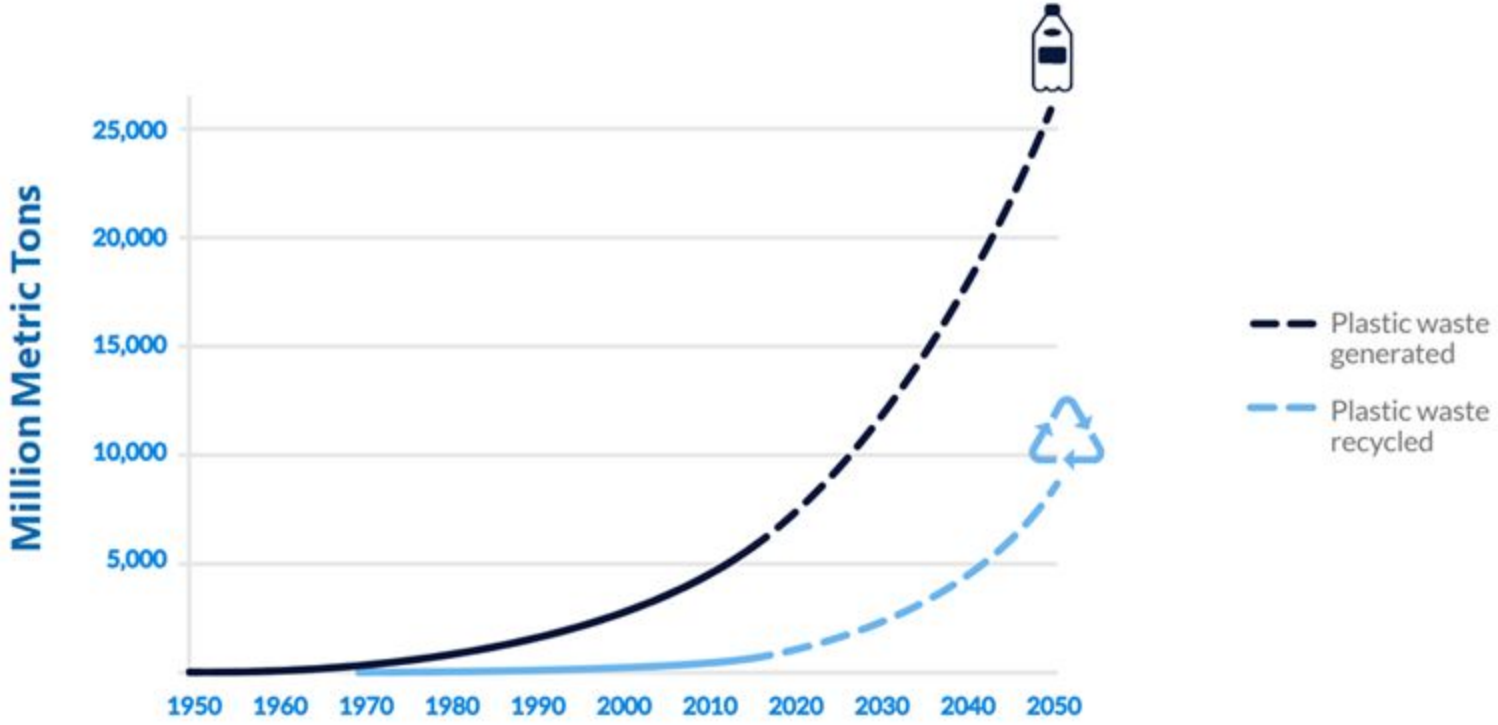


For more on chemical recycling: www.no-burn.org/chemical-recycling-resources



Dr. Neil Tangri
GAIA
neil@no-burn.org

Recycling Does Not Keep Pace With Plastic Waste



Source: Adapted from Geyer et al. 2017

REAL SOLUTION: REDUCTION

Key Reduction Pathways:

- Consumer/Business Facing Programs / Policies
  - Bans, Upon Request, Deposit, etc.

- Producer Facing Policies
  - Product Stewardship, Recycled Content, Producer Responsibility

Plastic Campaign and Policy Resources

Resources | Plastic Pollution Law Dataset | Updates | Get Involved

Foodware

Comprehensive Foodware Policy Toolkit (2020)

After over a decade of successfully advocating for and passing plastic policies such as bag, straw, and EPS bans, the Surfrider Foundation is turning towards the next generation of foodware bills that address plastic pollution in a more holistic and innovative manner. Foodware makes up a large proportion of solid waste and litter. This guide addresses how comprehensive foodware laws are the next step in making a larger impact.

DOWNLOAD COMPREHENSIVE FOODWARE POLICY TOOLKIT

CHARLIE PLYBON, SURFRIDER
OREGON POLICY MANAGER
CPLYBON@SURFRIDER.ORG

SURFRIDER.ORG/PROGRAMS/PLASTIC-CAMPAIGN-AND-POLICY-RESOURCES

CONSUMER REDUCTION STRATEGIES

CONSUMER CHOICES

“Upon request” and “Request-Only policies

FEES | TAXES | DEPOSITS

Consumer financial incentive policies, government tax systems and deposits

TARGETED BANS

Outright bans on targeted priority products

POLICY CONSIDERATIONS

Waste management, Consumer behavior, Life cycle, etc.

CONSUMER CHOICE POLICIES

“UPON REQUEST” & “ASK FIRST”

Generally softest approach, consumer education

STRAWS | STIRRERS

Oregon’s straw approach

CONDIMENTS | UTENSILS

Beyond the straw, framework for more comprehensive approaches

POLICY CONSIDERATIONS

Equity and access for disability, business impacts (ask first vs upon request), durable infrastructure, preemption

TARGETED BANS ON PRIORITY PRODUCTS

BAGS | MICROBEADS

Viable reusable alternatives exist

EXPANDED POLYSTYRENE

Foodware, cups & coolers - Harmful

FOODWARE, UTENSILS, ETC

Priority pollution items, short use, viable reusable alternatives .

POLICY CONSIDERATIONS

Definitions, alternatives and life cycle impacts, “composability”,, implementation/enforcement

PROGRESS IN OREGON

BAGS | BOTTLE BILL | STRAWS

Statewide some progress

EXPANDED POLYSTYRENE

Lots of local progress

FOODWARE, UTENSILS, ETC

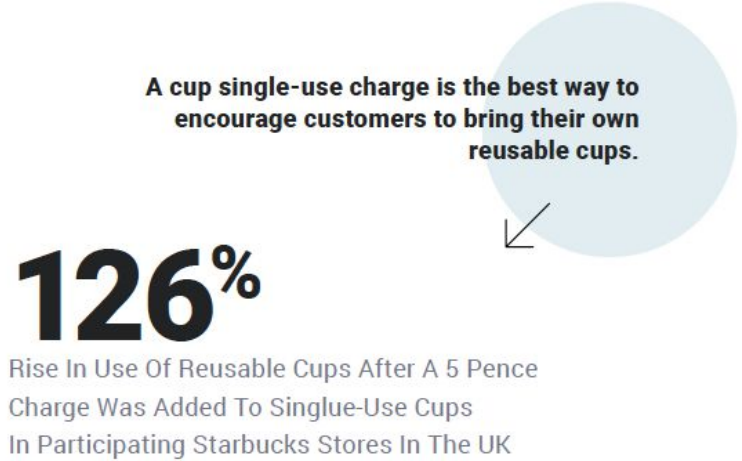
Rising local progress

POLICY CONSIDERATIONS

Definitions, alternatives and life cycle impacts, “composability”,, implementation/enforcement

COMPONENTS OF COMPREHENSIVE FOODWARE POLICIES

- All Foodware Must Be Recyclable Or Compostable*
- Reusable Foodware Required For “Dine In” Orders
- Utensils And Condiments Upon Request For Takeout And Delivery
- Single-Use Cup Charge
- Non-Reusable Food Container Charge



UTENSILS UPON REQUEST & DELIVERY PLATFORMS: POLICY CONSIDERATIONS

- The restaurant industry has been hit hard by COVID
- Increase in delivery during COVID
- Potentially saves restaurants money

COMPONENTS OF COMPREHENSIVE FOODWARE POLICIES

- Other Non-Foodware Plastic Bans
- PFAS In Foodware Ban

ECONOMIC ARGUMENTS: REUSABLE FOODWARE

- When you do the math, the cost of individually-wrapped condiment packets, disposable utensils, stirrers, beverage cups and lids, take-out containers, plates, and bowls all add up quickly
- All of ReThink Disposable's 300+ participating restaurants save money when making the switch
- Depending how big the operation, restaurants may experience thousands of dollars in cost savings per year

The University of San Francisco's Market Cafe saved after switching to reusables.

$150K
Saved Annually

2.6M
Disposable Items Reduced

10.24
Metric Tons Of Greenhouse Gas Emissions Reduced

CONCLUSIONS

- Development, adoption, and implementation of plastic pollution reduction laws is an iterative process

- Foodware laws have evolved over the last decade from being simple bans on EPS foodware to comprehensive legislation that addresses all potential material types

- This shift from simple bans to an **emphasis on reuse systems** is the next generation of foodware laws and best practices policy that we advocate for at the Surfrider Foundation.

PRODUCER RESPONSIBILITY

Producer responsibility seeks to incentivize manufacturers to reduce their use of packaging and build products that are less hazardous, built to last, and are easy to recycle or reuse by requiring that producers are responsible for all waste costs associated with their products, including waste collection, transportation and management, and litter clean-up costs.

CONTACT INFO

Celeste Meiffren-Swango
State Director, Environment Oregon
celeste@environmentoregon.org

Tara Brock
Pacific Counsel, Oceana
tbrock@oceana.org

Charlie Plybon
Oregon Policy Manager, Surfrider Foundation
cplybon@surfrider.org

SURFRIDER FOUNDATION

ENVIRONMENT OREGON
Protecting our air, water and open space.

OCEANA