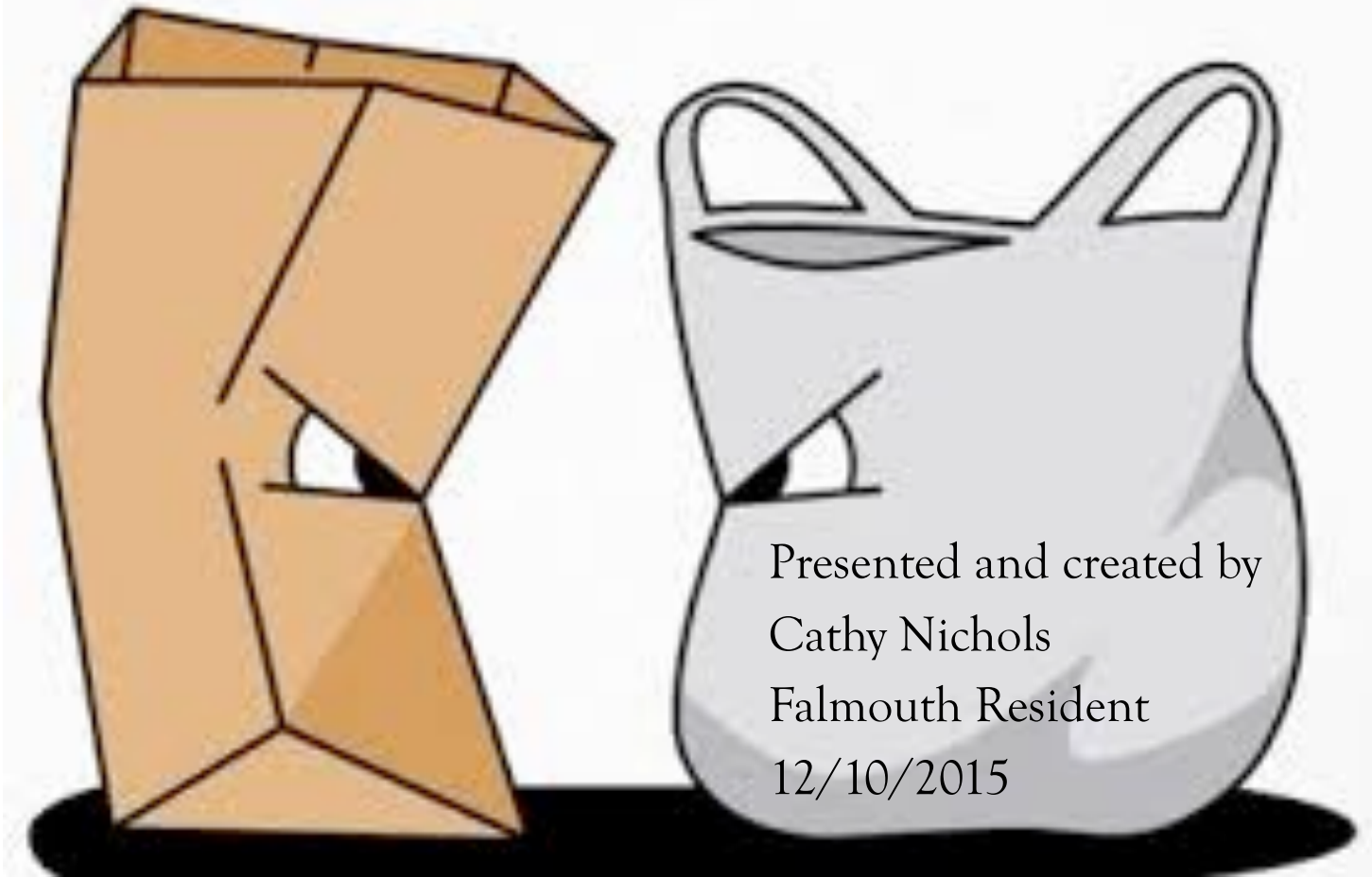


# Single Use Bags:

## Local Action with Global Awareness



Development of Falmouth's ordinance

Crucial steps

Lessons learned

Global plastic recycling

Global air pollution

Questions



# History of Falmouth's Single-Use Shopping Bag Ordinance

- Resident initiative June 2014
- Town Council asked REAC to research and recommend
- REAC contacted local organizations for guidance: ecoMaine, Natural Resources Council of Maine, Surfriders, City of Portland
- Business and community outreach and education

# ***Falmouth business feedback***

“How would a ban on single-use plastic bags affect your business?”

Little or not at all: **19**      Moderately: **12**      Very much affected: **13**

“Do you think it would be fair to charge your customers a 5 cent fee on single use bags?”

Yes: **5**      No: **25**

“How feasible would it be to document how many bags you charge a fee?”

Easy: **6**      Not easy: **9**      Not Sure: **8**

# Necessary Components

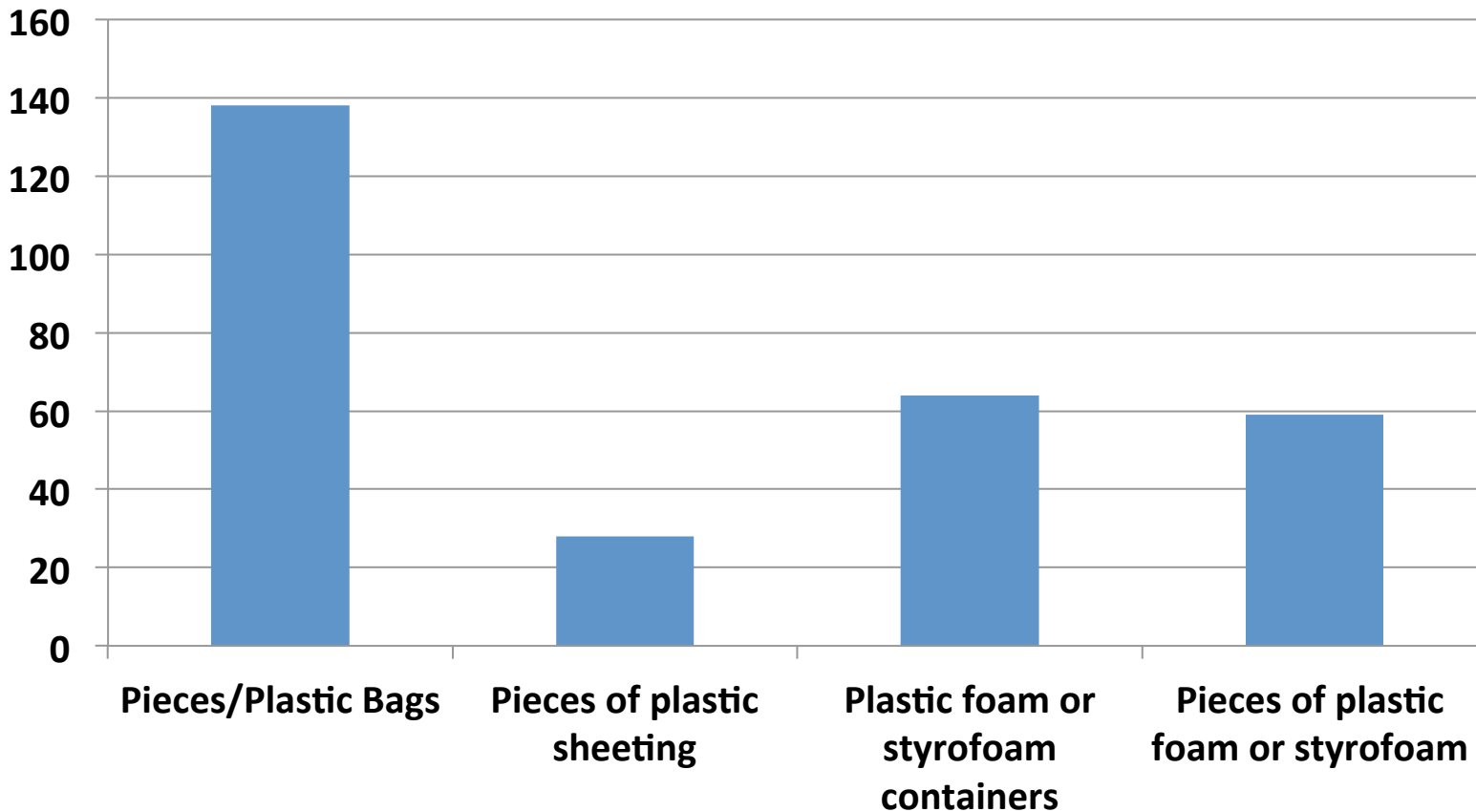
- Engaged Town Council
- Committee ordained by the town designated for environmental, sustainability or energy related duties
- Added bonus in Falmouth of a town employee liaison to REAC
- Responsive and resourceful recycling businesses and local organizations

# Council Request for Information

- Who else is doing this?
- What do residents do with their bags now?
- How do plastic bags end up as litter?
- Learn from Portland

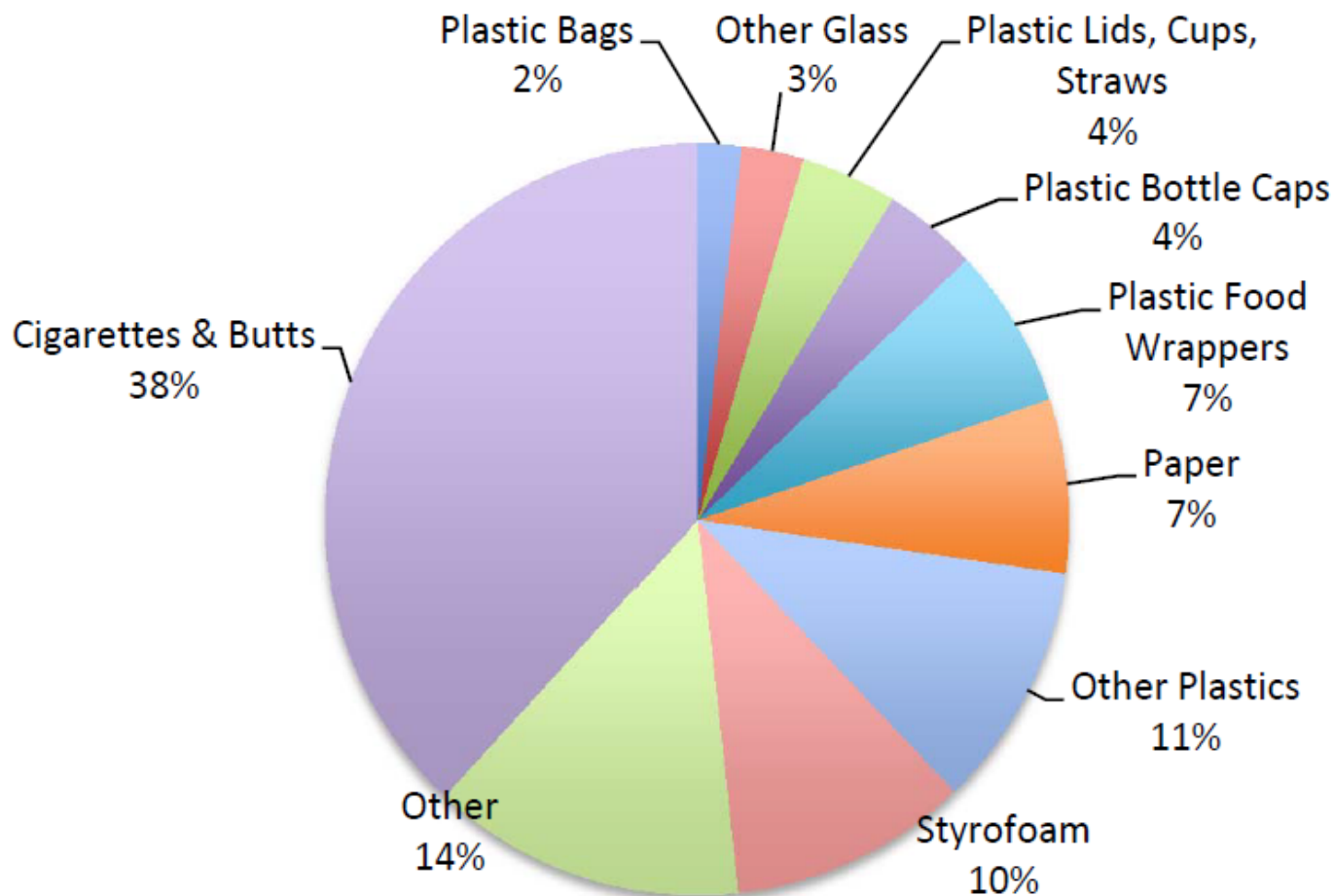
# Litter Cleanup Yields

## 72 Plastic Bags in 1 mile



St. Mary the Virgin Church May 17, 2015

## Top Items Found at San Diego County Beach Cleanups in 2011



# Crucial Steps

- Find your resources
- Read the papers
- Contact other communities
- Understand the legalities of your ordinance
- Learn how your ordinance will affect businesses
- Get and document business feedback
- Poll residents
- Research, research, research

# Lessons learned from Portland...

- Posting signs is important to inform customers
- Formal notification to businesses who must comply is very important
- Local environmental policies must be tailored to the size and mind-set of the community. Bottom line objectives were maintained by focusing on large quantity generators.

# Proposed Ordinance Language

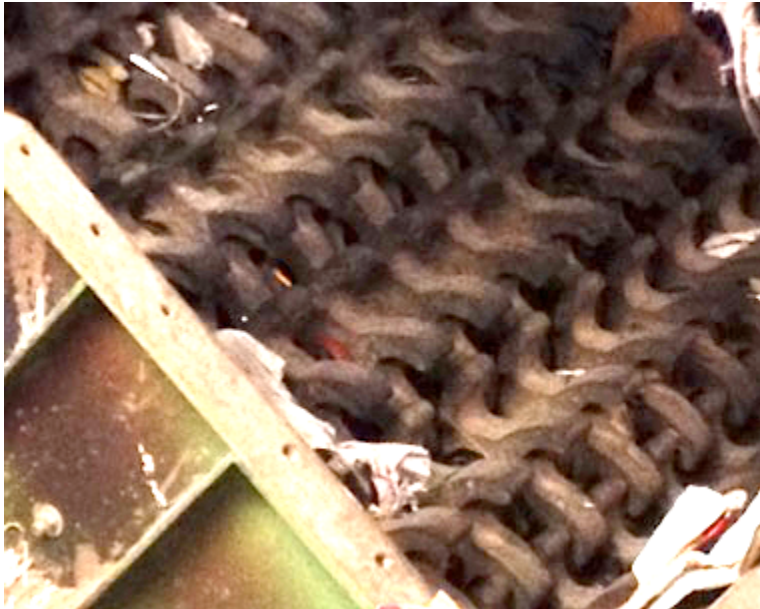
## Purpose:

- To reduce solid waste disposal costs to residents
- To discourage the use of single-use bags
- To encourage the use of reusable shopping bags

# Proposed Ordinance Language

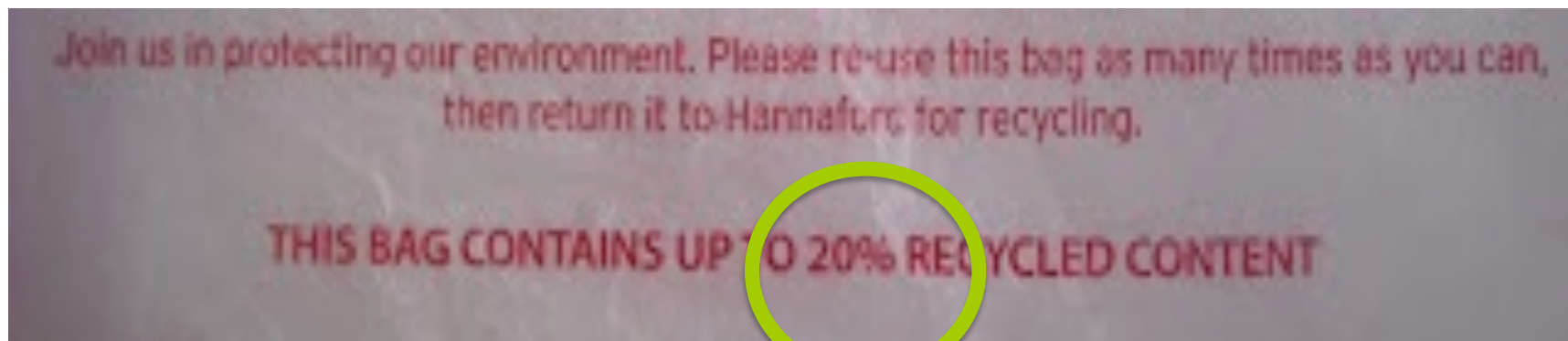
## Findings:

- Negative impact of wildlife
- Cost burden to recycling operations



## Findings (cont.):

- Coastal community obligations
- Town support for 3Rs
- Studies show fee reduces use
- No more free bags changes behavior



*.... and 80% raw  
materials  
(natural gas)...*

# Scope – Many Options

Food sellers >2%

All retail

Grocery stores only

Big stores only

Restaurants exempt

# Exemptions

- Produce and product bags without handles used to carry produce, meats or other food items or merchandise to the cash register,
- Product bags without handles used to prevent the above food items from coming into contact with other purchased items
- Bags for prescription drugs
- Dry cleaning bags



# Lessons Learned

- Never underestimate the power of public feedback
- Learn who your adversaries are and reach out to them
- Ensure published information is correct and complete
- Get free press by reaching out to your newspapers
- One size does NOT fit all

## ...Lessons

- Make your survey quantifiable so you can present good data from many sources
- Don't invite lobbyists to public forums
- Public forums are open to the public, not all allow for public comment
- Create policy that allows businesses to create their own environmental stewardship programs

## and more lessons

- Allocating a portion of the fee to an environmental cause is not feasible
- Use credible online sources, don't just surf (Bagtheban vs Banthebag)
- The deposit system did not get any traction in Portland's ordinance development
- Banning plastic bags at the point of sale might have eliminated thin film recycling

# In 1991 Maine passed

Title 38: Water & Navigation  
1605. Plastic bags; recycling:

Retailers may only provide customers with plastic bags if there is a receptacle to collect used plastic bags within 20 feet of the entrance and all the plastic bags collected are then recycled.



# Unintended Consequences

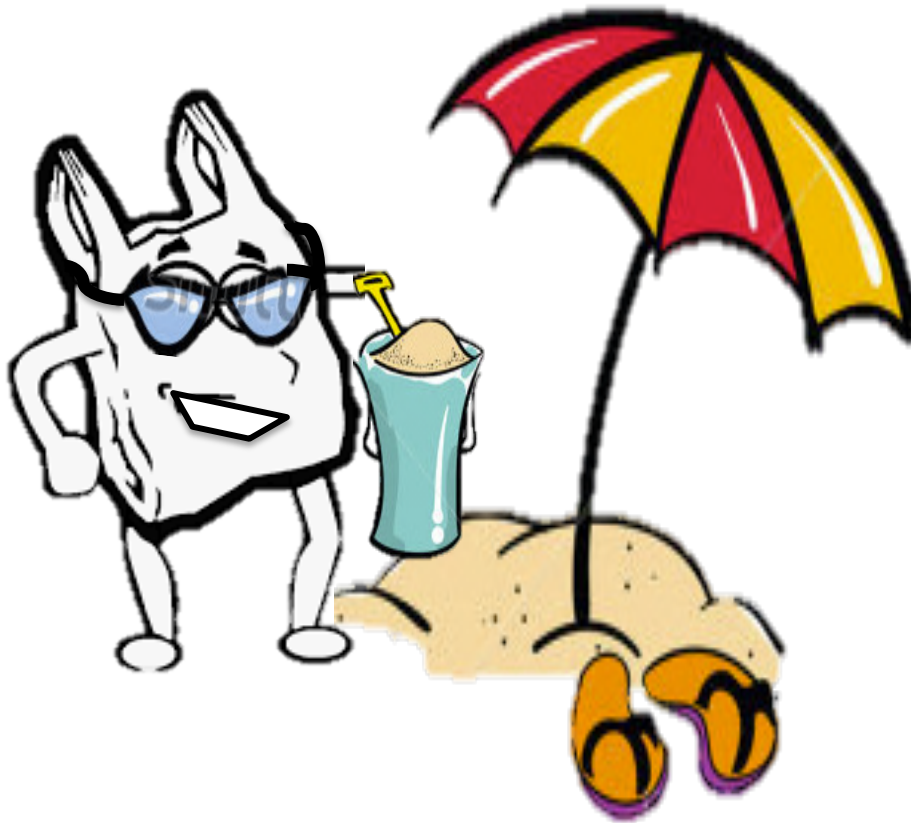
Thicker bags sold at some stores, studies across US show they are not being used as a reusable bag

This increases the use of a natural resource that ordinances are designed to reduce

**Take your bags  
back to your store  
Only clean bags  
Keep them dry**



...not the beach.



# Reusable Bags

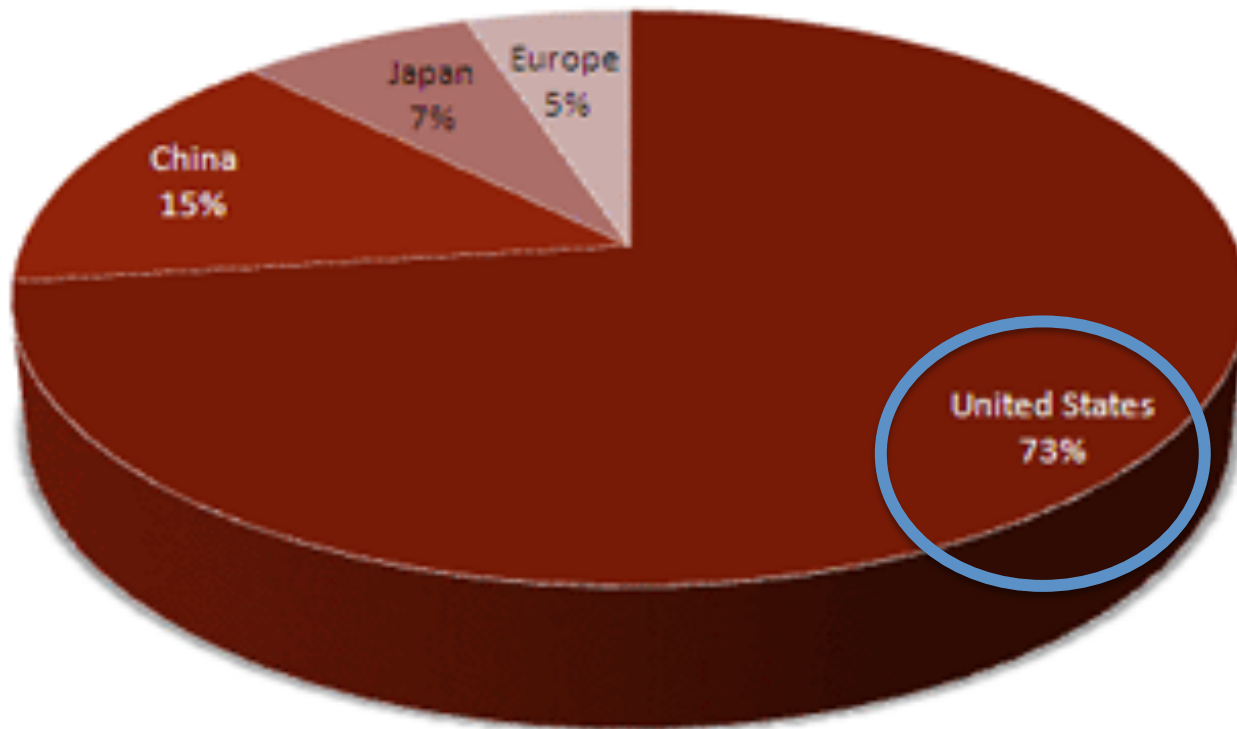
- Rarely made in U.S.
- Most are made from polypropylene (a plastic)
- Nonwoven polypropylene and cotton bags are not recyclable
- U.S. making thicker “reusable” bags from US post-consumer plastic waste
- Many U.S. suppliers buy from India, China, Vietnam

# Global Market and Capitalism Drive Recycling Markets



Falmouth's thin film from grocery stores  
is shipped to Trex

### Wood Plastic Composites



# Plastic World?

“In 2010, nearly 972 million pounds of plastic bags and film were recycled in the US, a 50% increase since 2005.”

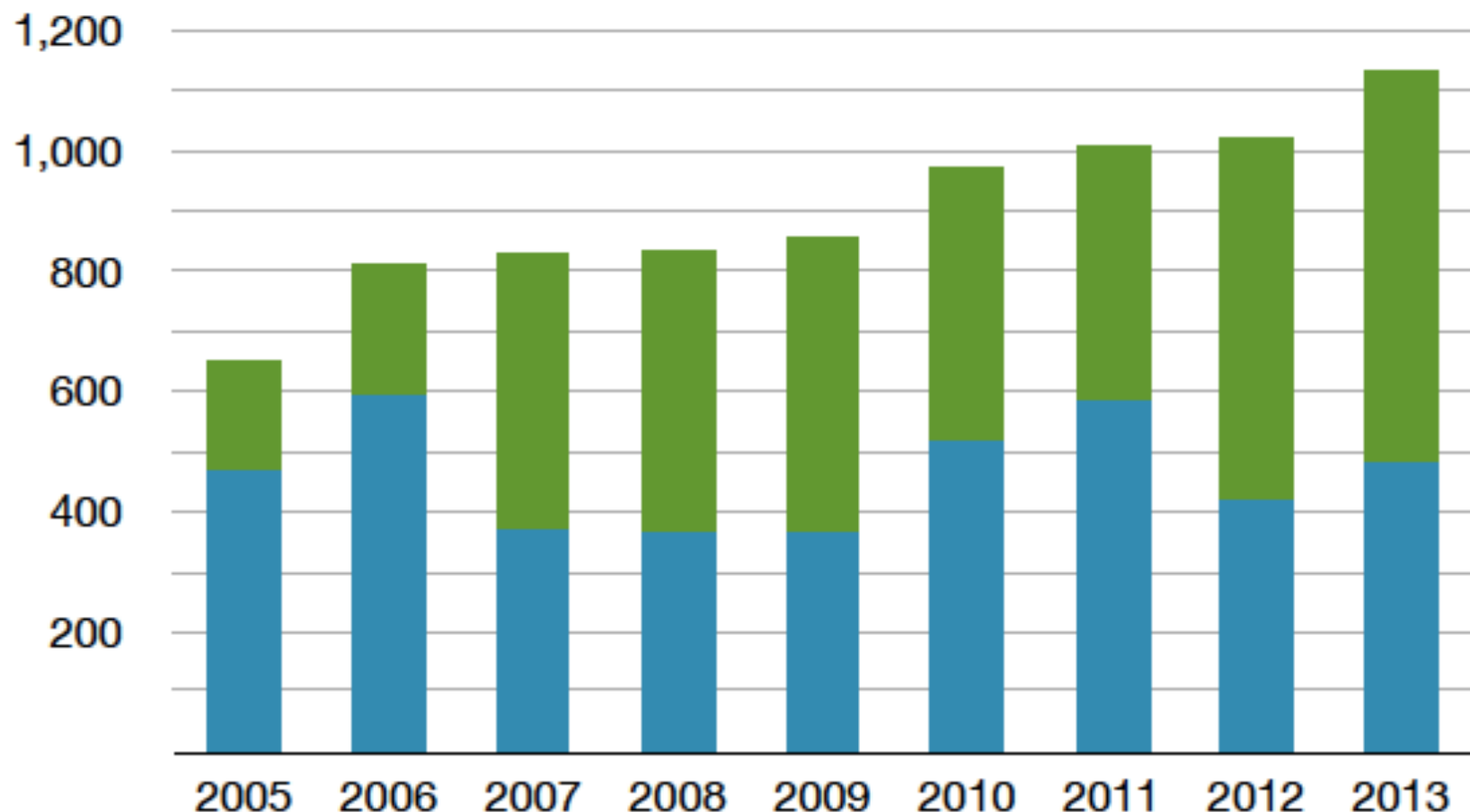
– AmericaRecyclesDay, Plastic Bag and Film Recycling 11.12.2012

Are we making more and more plastic, or are we just getting better at recycling?



## U.S. Postconsumer Film Recovered For Recycling (Millions of pounds)

■ For Use in U.S./Canada      ■ For Export



# TRUTH

RECYCLING SUCCESS IS DEPENDANT ON THE SUPPLY OF THE MATERIAL.

TRANSPORTING A LITTLE MATERIAL A LONG WAY IS NOT SUSTAINABLE.

MANUFACTURERS NEED FEED BACK ON HOW TO MAKE PRODUCTS MORE RECYCLABLE.

# Conundrum

- Plastic manufacturing has been growing exponentially.
- Plastic is generally cheaper to make than paper products.
- Plastic is much lighter, less fuel is used for transport to the user, and to the recycling or disposal destination.
- How many products do you buy that come in plastic now that used to have paper or glass packaging?

# Production comparisons

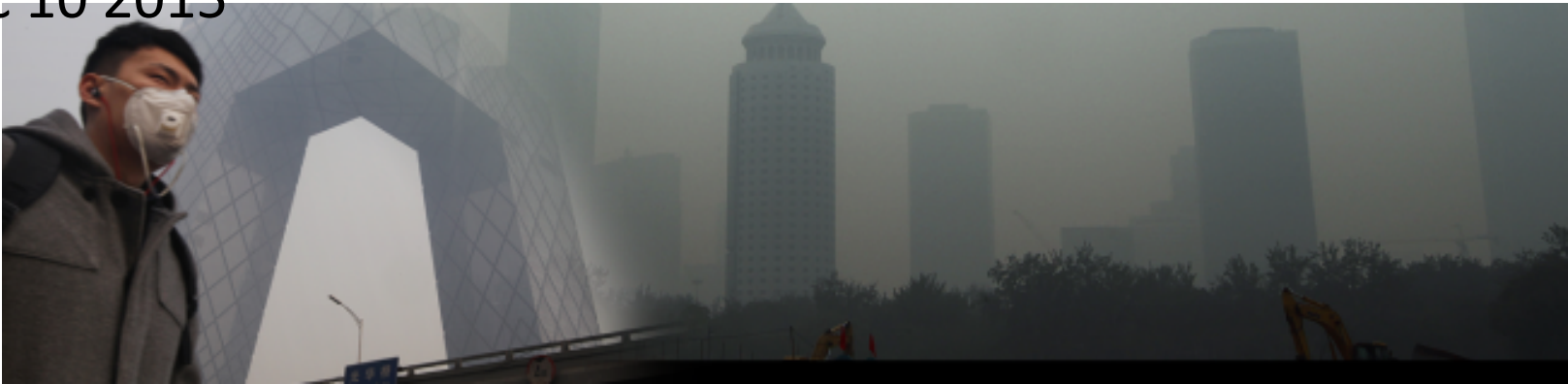
[www.letstalkplastic.com](http://www.letstalkplastic.com)



# Controversy Behind the Ban on Plastic Bags

**Beijing issues  
highest smog  
alert of the year  
as capital  
chokes on 'very  
unhealthy' air**

South China Morning  
Post Dec 10 2015



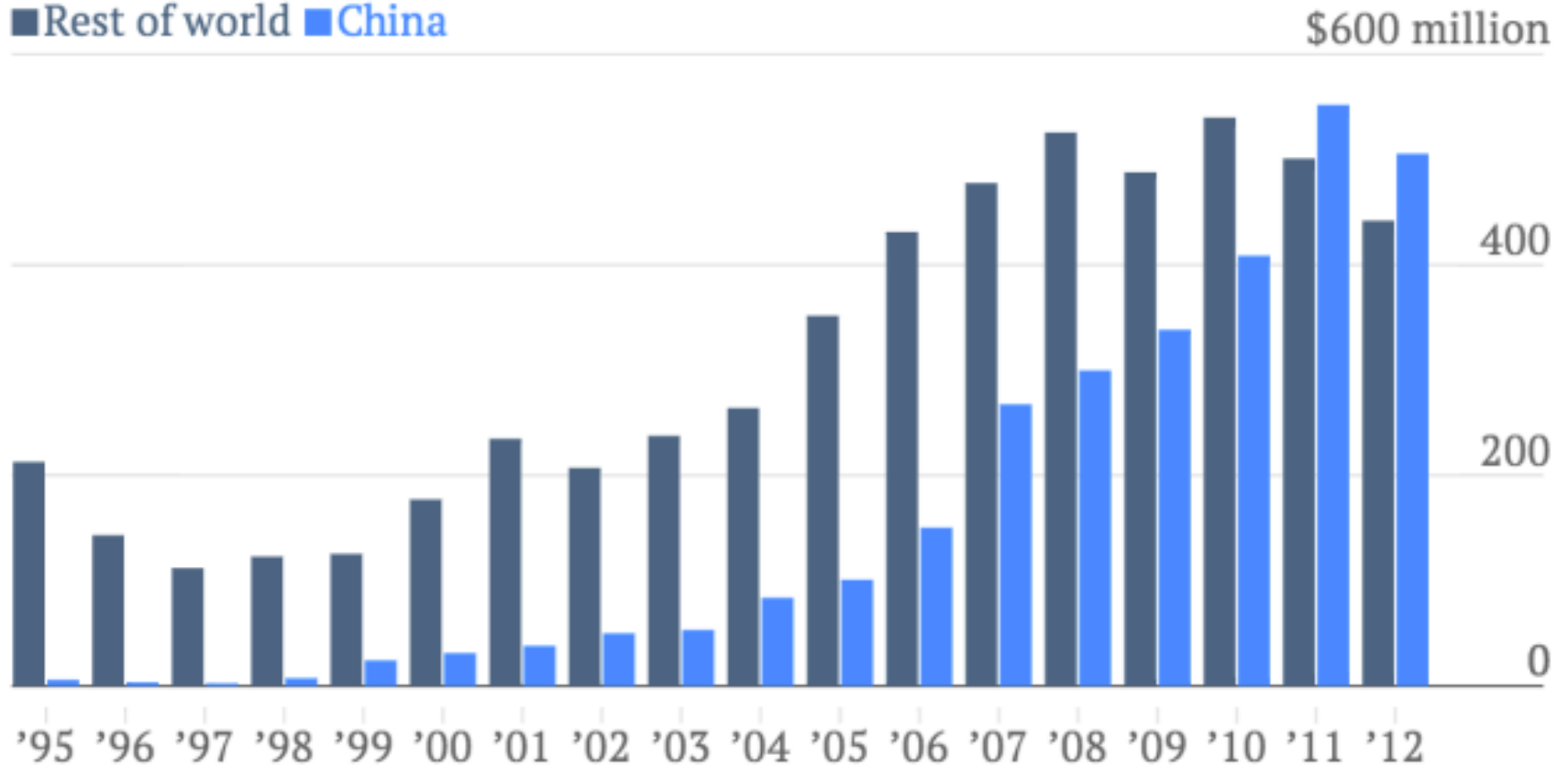
# China produces about a third of plastic waste polluting the world's oceans



South China Morning Post Dec 10 2015 quoting  
Science AAAS Report on Plastic waste inputs from land into the ocean

# Export Rates Show Increase in US Plastic Use

US export of plastic scrap  
■ Rest of world ■ China



- China banned plastic bags in 2008
- plastic scraps that aren't high quality for recycling end up being burned with insufficient air emission controls
- waste processing centers in China have created serious environmental problems due to insufficient implementation of environmental policy

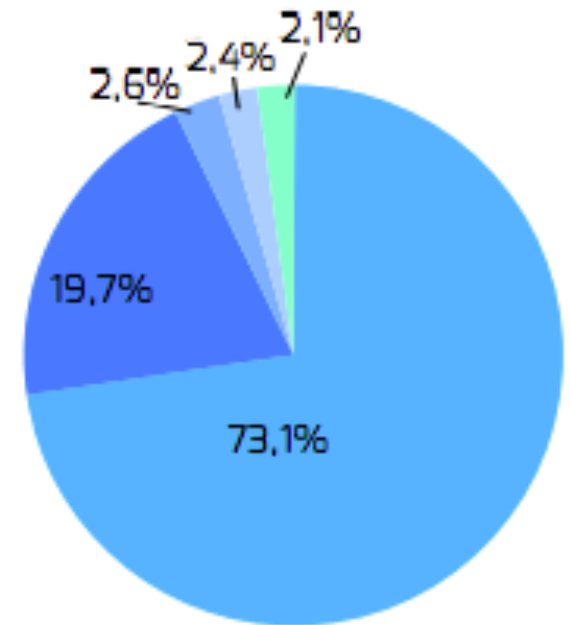
# Plastic Waste:

## Imports and Exports

### Top 5 importers



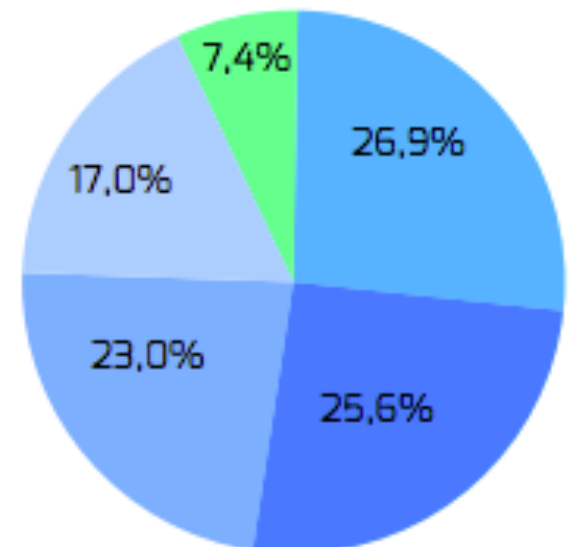
Total Import: \$8,359,094,112



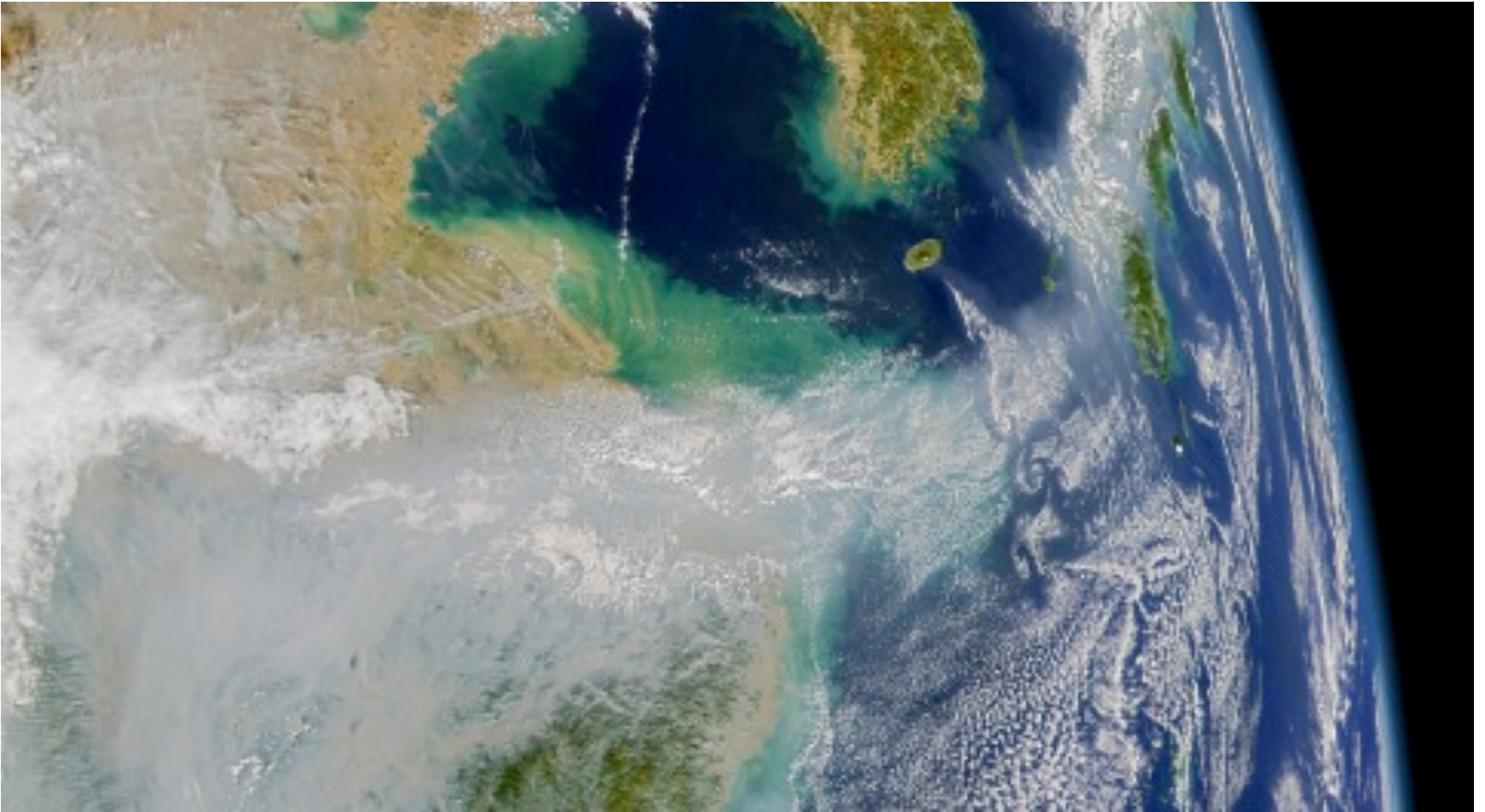
### Top 5 exporters



Total Export: \$4,104,994,801



Ozone and mercury pollution from Chinese industry is contributing to worsening air quality in west coast states



<https://www.chinadialogue.net/article/show/single/en/5615-US-cities-suffer-impact-of-downwind-Chinese-air-pollution>

# More Dilemmas

Air standards in the US are getting higher  
EPA suggests that downwind air pollution from  
Asia would wipe out the improvements  
expected from recent national emission control  
programs.

<https://www.chinadialogue.net/article/show/single/en/5615-US-cities-suffer-impact-of-downwind-Chinese-air-pollution>

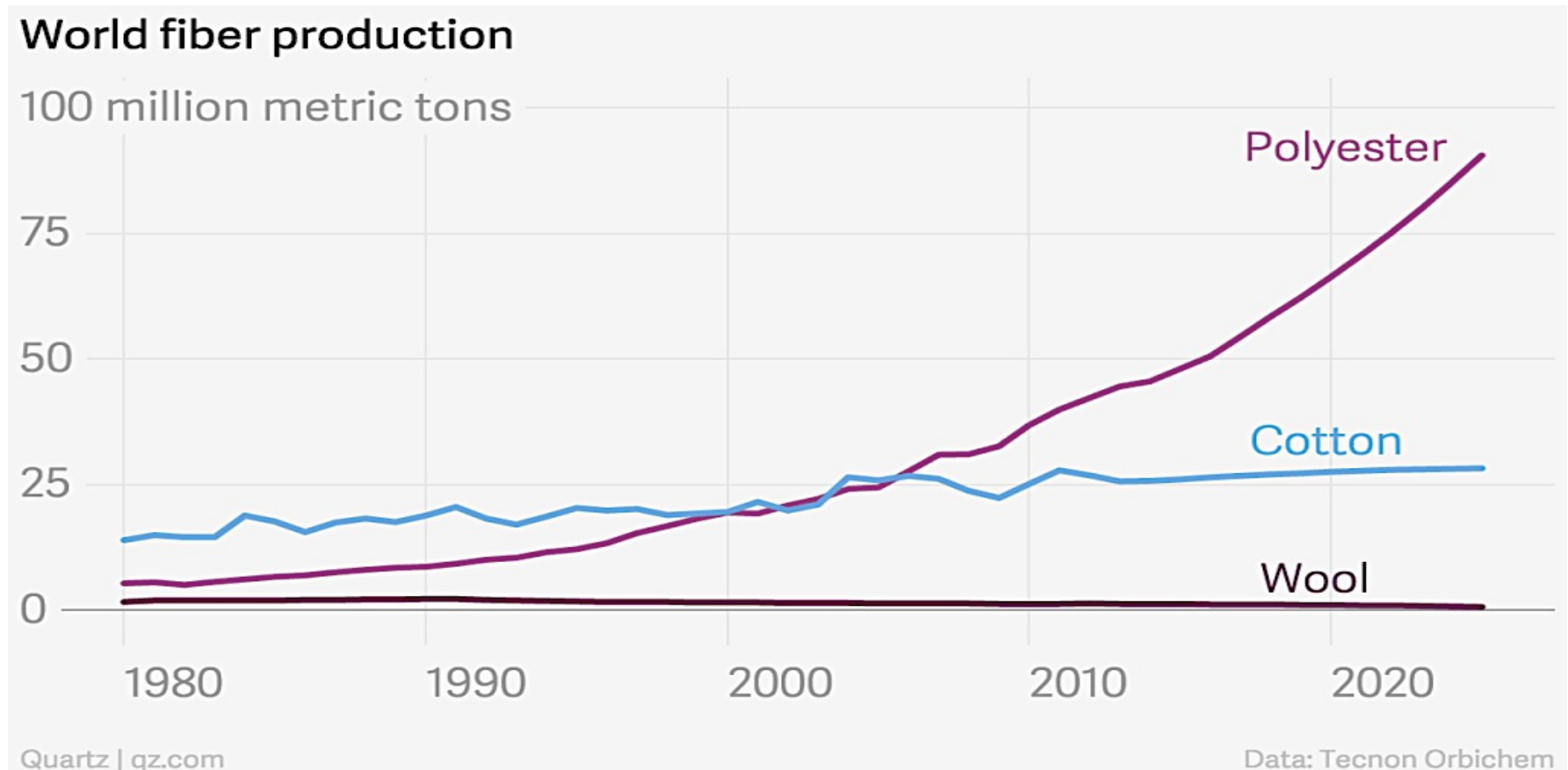
China began importing coal in 2007

US exports coal to China:

32,600,000 tons in 2012

22,700,000 tons in 2014

# Our clothes are increasingly made of plastic



# Synthetic fibers

- **our growing appetite for clothing outruns our ability to grow cotton**
- polyester may be better for the environment than cotton because of the large quantities of pesticides needed to grow cotton, and lots of water
- polyester is made from crude oil

# Humor, tolerance, awareness



- by vonklueg

# Online Information

Bags, bans and fees:

<http://www.resource-recycling.com/images/Skumatz0312rr.pdf>

News Feature study about Microplastics in the ocean:

<http://www.pnas.org/content/112/18/5547.full.pdf>

Global recycling markets: plastic waste:

[https://www.iswa.org/fileadmin/galleries/Task\\_Forces/TFGWM\\_Report\\_GRM\\_Plastic\\_China\\_LR.pdf](https://www.iswa.org/fileadmin/galleries/Task_Forces/TFGWM_Report_GRM_Plastic_China_LR.pdf)

China's push to cut coal:

<http://www.mcclatchydc.com/news/nation-world/world/article24781279.html#storylink=cpy>

Paper or Plastic?

<http://www.washingtonpost.com/wp-dyn/content/graphic/2007/10/03/GR2007100301385.html>

Recycling post consumer plastics:

[www.plasticsrecycling.org/images/pdf/market\\_development/APR\\_Design\\_Guide\\_2014.pdf](http://www.plasticsrecycling.org/images/pdf/market_development/APR_Design_Guide_2014.pdf)