



Group 4 Plastic Use: Challenges and Opportunities

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Plastic Pollution



<https://www.youtube.com/watch?v=IA9O9YUbQew>



Russia



3.3 million tons/year
Only 12% is recycled

United States



34.5 million tons/year
Only 9.1 % is recycled

Colombia



1.3 million tons/year
Only 17% is recycled

Nepal



0.5 million ton/year
Almost 0% recycled

Czech Republic



1,1 million tons/year
Over 50 % recycled

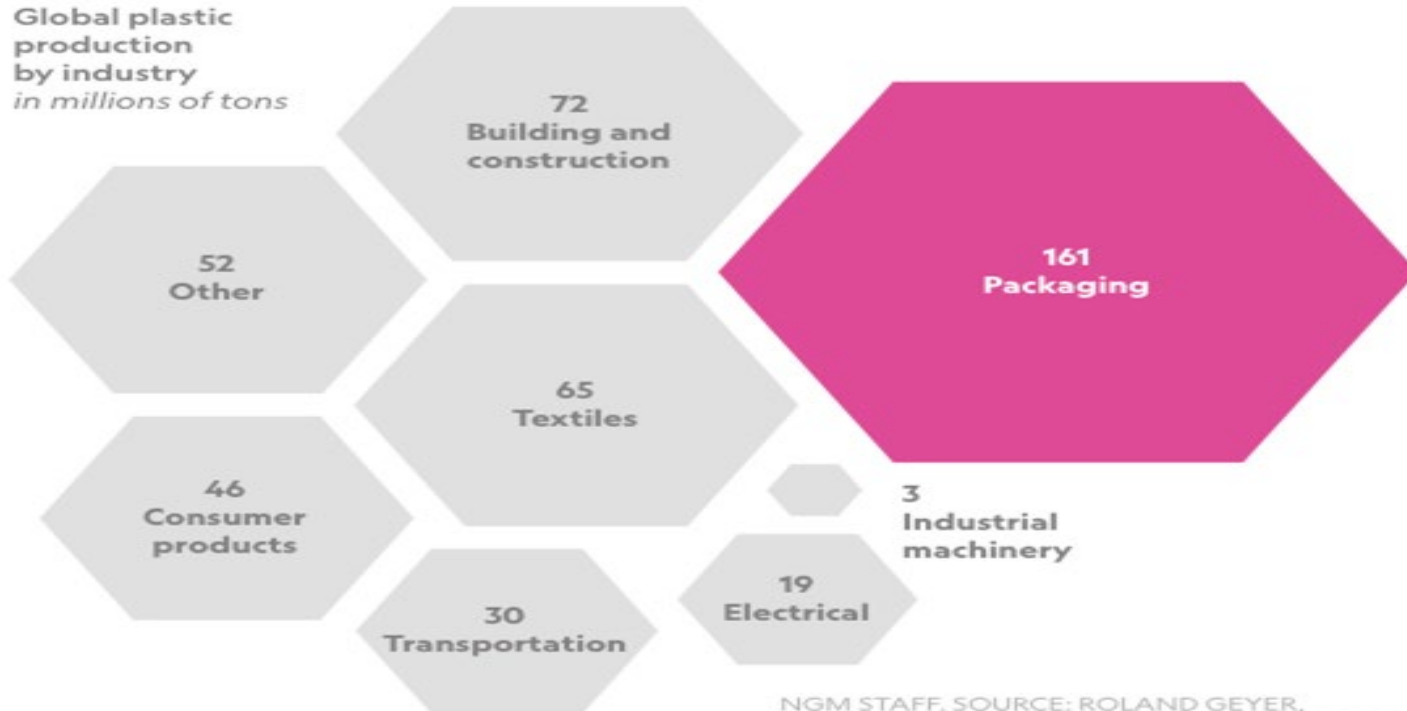
Peru



1.0 million tons/year
Only 10% is recycled

Plastic Use by Application

Global plastic production by industry in millions of tons



NGM STAFF. SOURCE: ROLAND GEYER, UNIVERSITY OF CALIFORNIA, SANTA BARBARA

Main Problems

1. Financial
2. Structural
3. Institutional
4. Corporate
5. Information
6. Markets
7. Strategic



Municipal Tax

Source: <https://www.taxqueries.in/income-tax/municipal-tax/>



Source: <http://www.storytrender.com/52856/bottleneck-russian-waterway-is-river-of-bottles-revealing-plastic-pollution/>



Source: www.canecas.com.co

American Plastic Bag Use

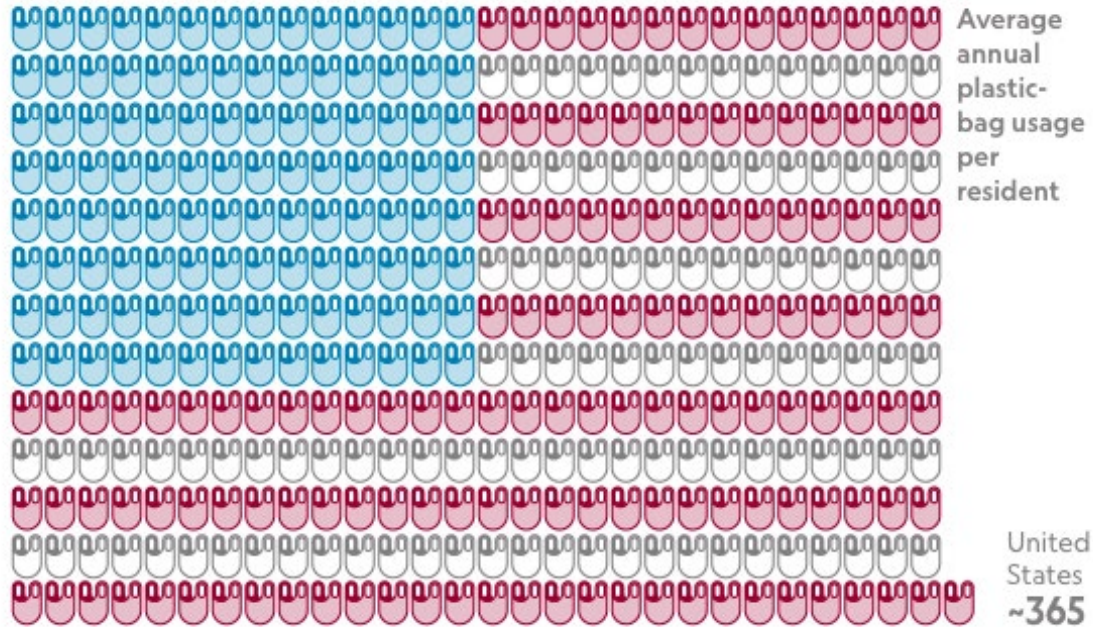


Image credit: National Geographic

Shoppers in the United States use about one plastic bag per day.

Coca Cola 100bn Plastic Bottles



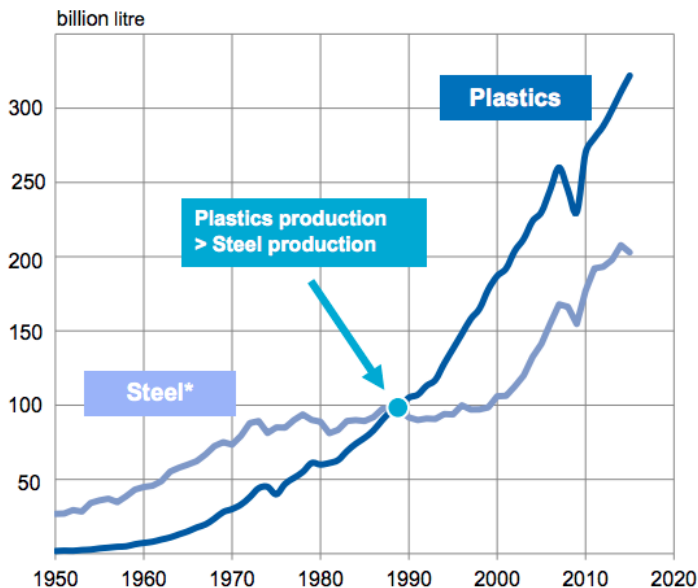
Image credit: The Guardian 2017

In 2016 Coca-Cola alone used over 100 bn pl

Plastic Outpaces Steel Production

World Benchmark Plastics / Steel 2015

PlasticsEurope
Association of Plastics Manufacturers



- Plastics in 1989, passed steel production by volume

Global Production 2015 :

- Plastics: 322 Mio. t = 322 billion litre
- Steel: 1,623 Mio. t = 203 billion litre
- Calculation Model:
1 kg plastics = 1 litre
8 kg steel = 1 litre

Plastic Problem Solutions



Better design

of plastics for less toxicity, more durability and easier recycling



More information

to raise awareness and encourage responsible behaviour



Actions

to encourage the use of recycled plastic



Stronger incentives








to collect, sort and recycle all plastics

OBJECTIVE

A more circular economy and a new strategy for plastics will make Europe's economy more sustainable and more competitive, with benefits for business and citizens alike.

What Can You Do to Consume Less Plastic?

Plastic Resin Identification Codes

1 PETE	2 HDPE	3 PVC	4 LDPE	5 PP	6 PS	7 OTHER
Polyethylene Terephthalate	High-Density Polyethylene	Polyvinyl Chloride	Low-Density Polyethylene	Polypropylene	Polystyrene	Other
Common products: soda & water bottles; cups, jars, trays, clamshells	Common products: milk jugs, detergent & shampoo bottles, flower pots, grocery bags	Common products: cleaning supply jugs, pool liners, twine, sheeting, automotive product bottles, sheeting	Common products: bread bags, paper towels & tissue coverings, squeeze bottles, trash bags, six-pack rings	Common products: yogurt tubs, cups, juice bottles, straws, hangers, sand & shipping bags	Common products: to-go containers & flatware, hot cups, razors, CD cases, shipping cushion, cartons, trays	Common types & products: polycarbonate, nylon, ABS, acrylic, PLA; bottles, safety glasses, CDs, headlight lenses
Recycled products: clothing, carpet, clamshells, soda & water bottles	Recycled products: detergent bottles, flower pots, crates, pipe, decking	Recycled products: pipe, wall siding, binders, carpet backing, flooring	Recycled products: trash bags, plastic lumber, furniture, shipping envelopes, compost bins	Recycled products: paint cans, speed bumps, auto parts, food containers, hangers, plant pots, razor handles	Recycled products: picture frames, crown molding, rulers, flower pots, hangers, toys, tape dispensers	Recycled products: electronic housings, auto parts,
						

Source: <http://mediaroom.wm.com/recycle-more-or-recycle-better/>

- Carry a reusable bottle
- Say no to plastic straws and disposable cutlery
- Take a reusable coffee cup
- Avoid excessive food packaging
- Carry a shopping bag
- Use refill stations for detergents



Source: <https://www.greenpeace.org.uk/9-ways-reduce-plastic-use/>

Thank you for your attention!

Image credit:

(A man, woman and child toss "disposable" items into the air, 1955.
Peter Stackpole—The LIFE Picture Collection/Getty Images)

