

# Marine Debris

Information About Ocean Conservancy and the  
Trash Free Seas Program

April 24, 2017

**Protect our ocean from today's  
greatest challenges**

# The International Coastal Cleanup



# About the International Coastal Cleanup (ICC)

The ICC is the Trash Free Seas Program's oldest and most widely recognized project. For over 30 years, volunteers with Ocean Conservancy's International Coastal Cleanup have removed millions of pounds of trash from our oceans, beaches and waterways. Volunteers not only pick up trash, they count every item resulting item-by-item, location-by-location Ocean Trash Index that provides a global snapshot of the ocean trash littering the world's coasts and waterways.



# About the Trash Free Seas Alliance (TFSA)

Ocean Conservancy launched the TFSA in 2012. The TFSA brings together thought leaders from industry, conservation and academia to create a forum for pragmatic, real-world collaboration focused on the measurable reduction of ocean trash. The TFSA is one project within the Trash Free Seas program at Ocean Conservancy

- **TFSA Vision:** A world with waterways, beaches and an ocean free of trash
- **TFSA Mission:** Unite leaders to eliminate ocean trash
- **TFSA Goal:** Create pragmatic, real-world collaboration focused on reducing the amount of plastic waste leaking into the ocean annually by 50% by 2025

# Current TFSA Members



# Science: Building the Foundation

- Two years ago, Ocean Conservancy recognized that the scientific field of marine debris was young, fragmented and was in need of synthesis about just what we know of the scale and scope of the problem of manmade materials in the ocean.
- We initiated an independent scientific working group made up of 2 dozen scientists housed at NCEAS, the National Center for Ecological Analysis and Synthesis at UC Santa Barbara.

**How much plastic debris enters the ocean?**

**Where does it go?**

**What are the impacts?**



**270**  
million metric tons  
Global plastic production\*

**275**  
million metric tons  
Total plastic waste

**99.5**  
million metric tons  
Coastal plastic waste

**31.9**  
million metric tons  
Coastal mismanaged plastic waste

**8** Million metric tons of plastic waste goes into the ocean

6,350-245,000 metric tons\*\*

Estimated mass of plastic waste floating at the ocean surface

Generated by 2 billion people within 50 km (30 miles) of the coast

**Mitigation options:**

Reduce plastic in waste stream

Improve solid waste management infrastructure

Increase capture

# Plastic waste inputs from land into the ocean in 2010

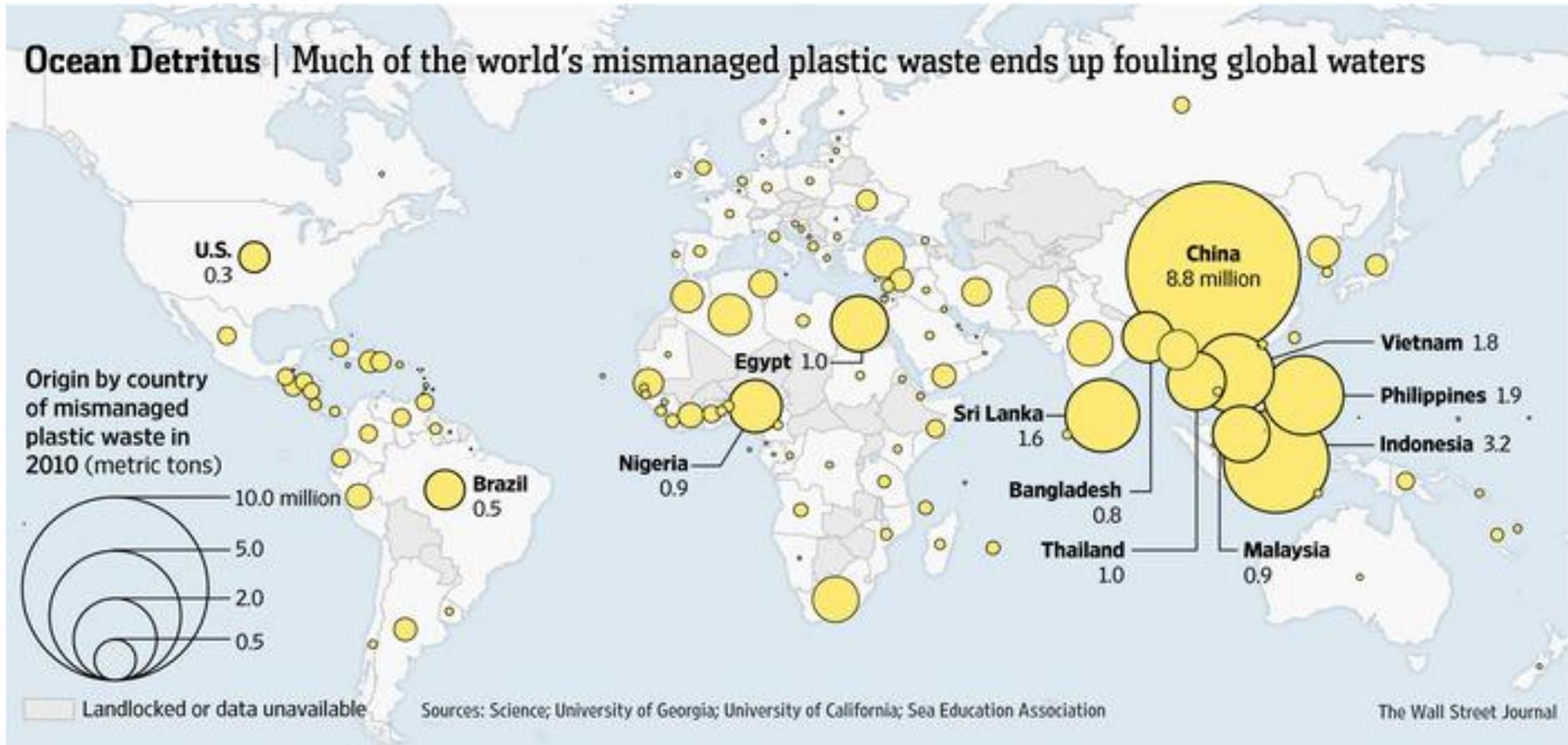
The 192 countries with a coast bordering Atlantic, Pacific, and Indian oceans, Mediterranean and Black seas produced a total of 2.5 billion metric tons of solid waste. Of that, 275 million metric tons was plastic, and an estimated 8 million metric tons of mismanaged plastic waste entered the ocean in 2010.

\*Plastics Europe, "Plastics—the Facts 2013" (2010 data)

\*\*Cózar et al., 2014; Eriksen et al., 2014

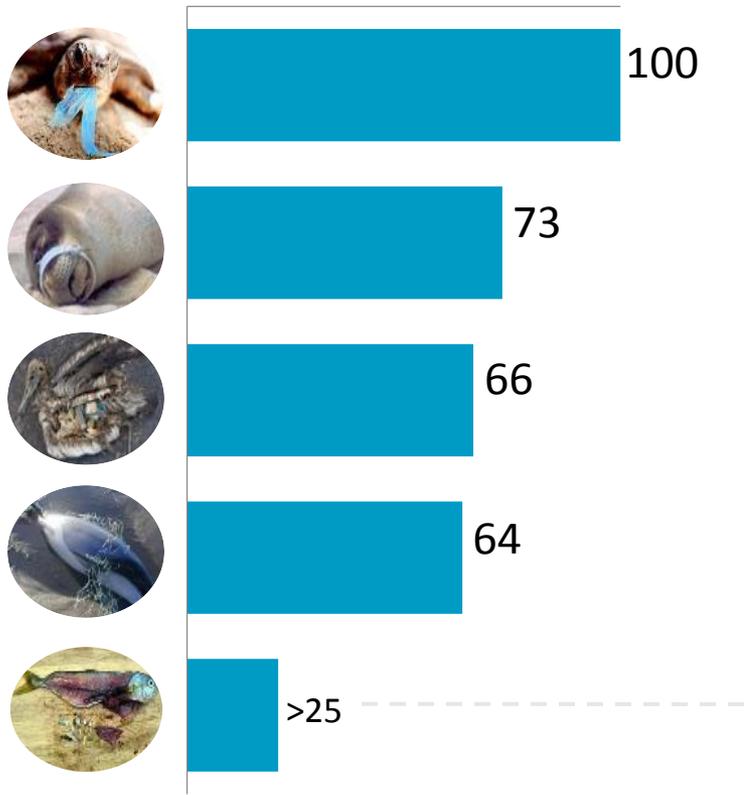
Graphic by Lindsay Robinson/University of Georgia

# 50% of plastic leakage comes from 4 countries – China, Indonesia, the Philippines and Vietnam



# Plastic impacting ~700 marine species

## Marine life impacted by plastic % of total



SOURCE: 2012 Convention on Biological Diversity report; press search; Plastic ingestion by planktivorous fishes in the North Pacific Central Gyre; Choy and Drazen 2013, Marine Ecology Progress Series; Beorger et al. 2010, Marine Pollution Bulletin; Davison and Asch 2011, Marine Ecology Progress Series; Rochman et al. 2016, *Scientific Reports*

# 25%+ fish sold in fish markets have plastic fragments in their guts across the globe...



## Indonesia:

- Debris in 28% of fish
- 55% species
- **60% fragments**
- 0% fibers



## United States:

- Debris in 25% of fish + 33% shellfish
- 67% of all species
- 3% fragments
- **80% fibers**

# TFSA Signature Initiative Steering Committee

Members of the Steering Committee are committed to helping to **define the scope and work plan** for the different project phases of the Signature Initiative. The Steering Committee is closely **engaged in the project process and any associated events**.

Steering Committee member tenure applies to individual phases of the Signature Initiative. Members are expected to contribute above and beyond Alliance membership. **Please contact Ocean Conservancy to learn more.**



# TFSA Signature Initiative

The TFSA's Signature Initiative builds on the existing scientific research available to develop solutions to prevent waste from entering the ocean with a focus on countries where plastic inputs into the ocean are greatest .



**Stemming the Tide:**  
Land-based strategies for a plastic-free ocean



# Pathways to tackle disposed marine debris

## Short to medium term pathways

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Beach and waterway cleanups

Waterway infrastructure

Leakage point monitoring coupled with localized interventions

Whole waste stream collection

Traditional waste management: sanitary landfills and W2E

Vertically integrated waste management systems using emerging tech to process 'low value' plastics

**Root cause**

Strengthening  
recycling

# Questions?

## Contact

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