

National Zero Waste Business Conference

The Macro Costs of Micro Contamination

June 3, 2016 – Austin, TX



5GYRES

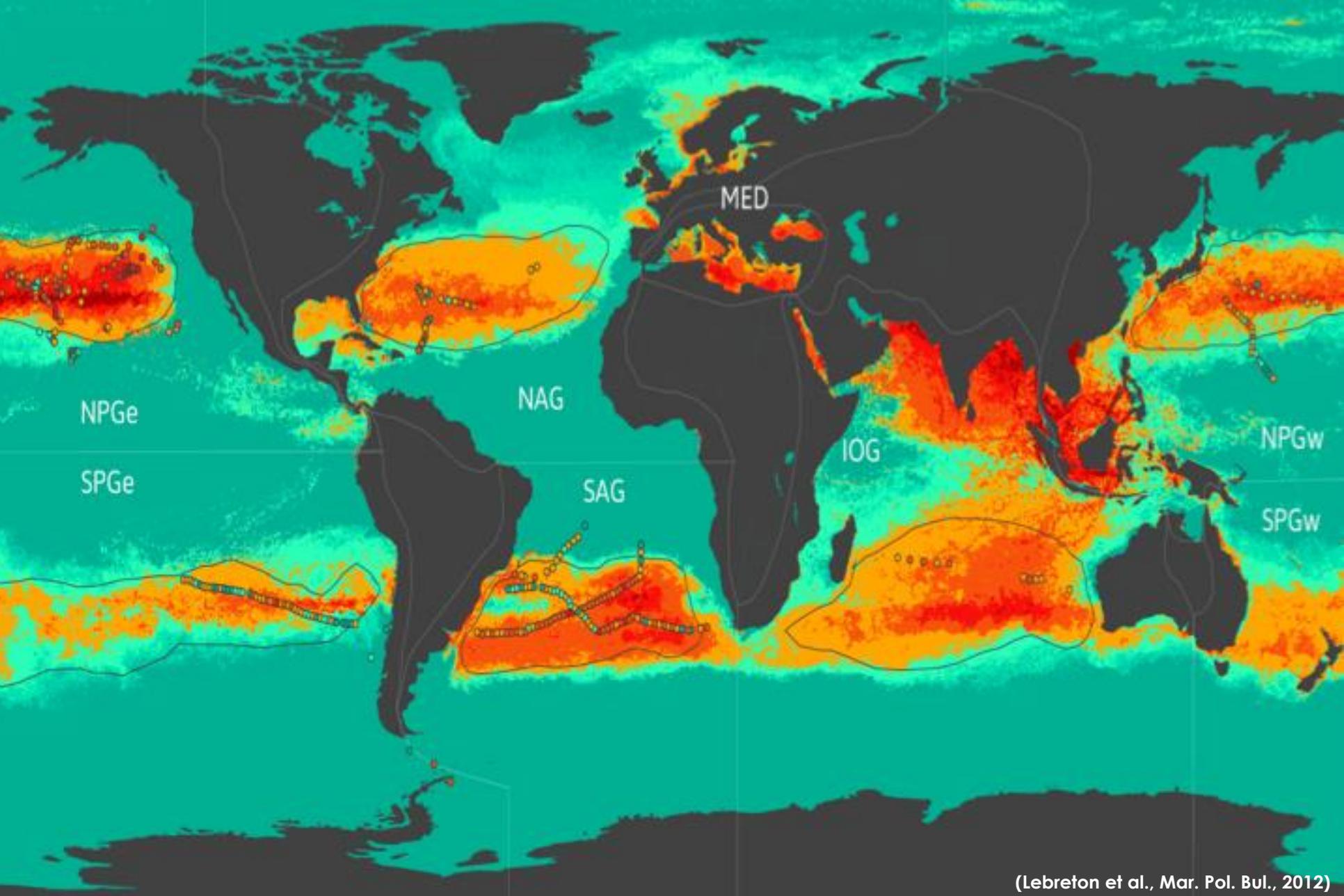
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Community Engagement

5 Gyres Institute

**MORE
OCEAN
LESS
PLASTIC**

**By 2025 there will be one ton of plastic for every three tons of fish in our oceans.
By 2050 there will be more plastic in the sea (by weight) than fish.**



The Gyres: Plastic Pollution Accumulation Zones

THE ISSUE

8 MILLION METRIC TONS

The amount of plastic that enters the ocean each year.

15-51 TRILLION

The estimated number of pieces of plastic floating on the ocean surface.

HYDROPHOBIC

Once in our waterways, plastics act as sponges, soaking up all the chemicals – like PCB, DDT – that don't mix with salt water.

FISH FOOD

These toxic-laden plastics look super tasty to fish. And we all know fish look tasty to us.



**Local waterways act as conveyer belts,
sending plastics straight out to sea.**



Trashing our ocean playground.



A Plastic Smog



time at sea





Three-month old rainbow runner with 17 pieces of plastic inside its stomach.

HOW DID WE GET HERE?

Mom says
I'm so fresh
and so clean
(sometimes)--
she ought to
wrap me in
Cellophane
to keep me
that way.



Everything's at its best in Cellophane

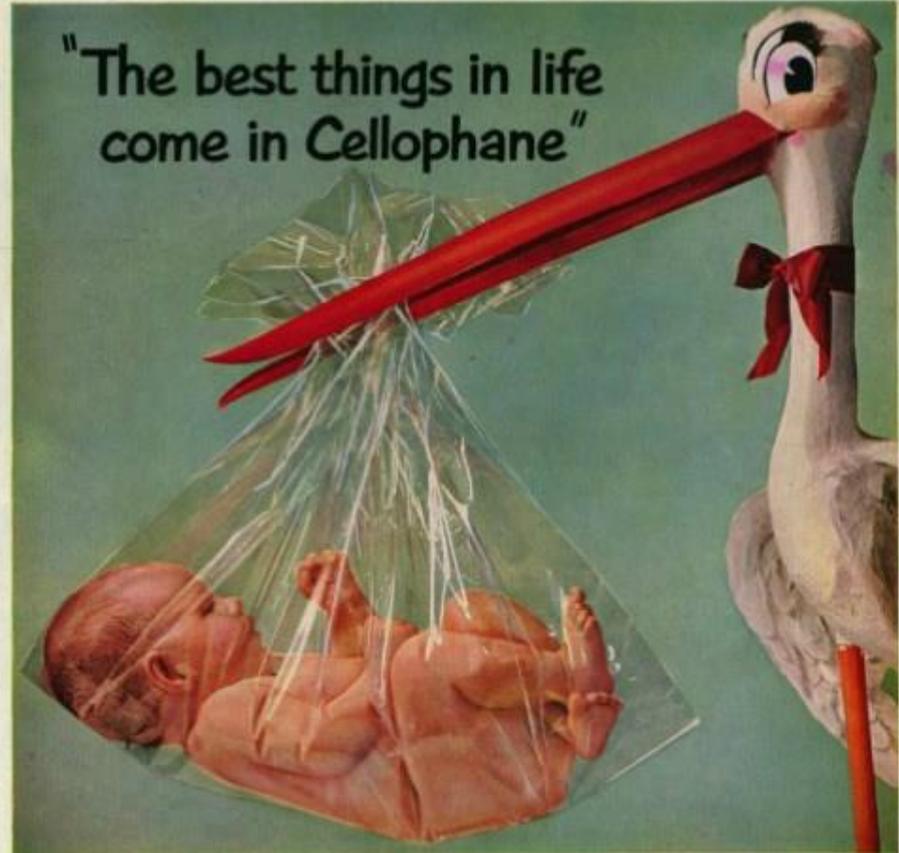
- Cellophane keeps things clean
- Cellophane keeps things fresh
- Cellophane lets you see what you buy



BETTER THINGS FOR BETTER LIVING
THROUGH CHEMISTRY

Read The Red Booklet About The Stork

"The best things in life
come in Cellophane"



"You SEE
what you
buy--no
guesswork."



"Foods come
fresh--stay
fresh longer--
less waste."



"...and things
in Cellophane
are clean and
sanitary."



DU PONT
Cellophane

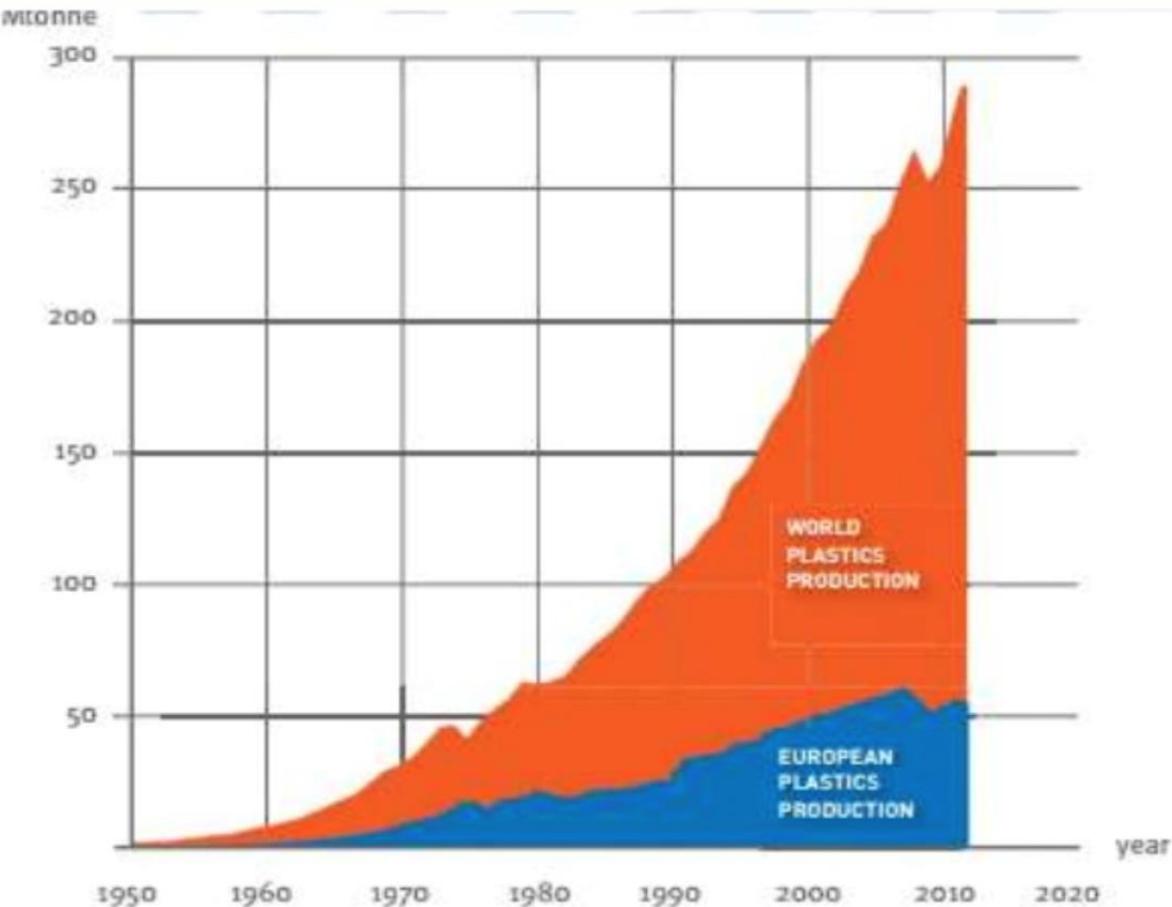


BETTER THINGS FOR BETTER LIVING... THROUGH CHEMISTRY
Look at "Cauldrons of America" on Television

Life Magazine "Throw Away Living" 1955



World Plastics Production and their Consumptions



Plastics are a global success story

- 1950: 1.7 Mt
- 1976: 47 Mt
- 1989: 100 Mt
- 2002: 204 Mt
- 2007: 257 Mt
- 2011: 279 Mt
- 2012: 288 Mt
- 2013: 299 Mt

Note: Based on preliminary estimates by European Market Research & Statistics Working group. Includes thermoplastics, thermosets, adhesives, coatings and dispersions. Fibers are not included

Source: Plastics Europe 2013, WG Market Research & Statistics

THE MACRO COSTS OF MICROPLASTICS

ENVIRONMENT

More than 600 marine species affected by plastic through ingestion and entanglement. Our watersheds and oceans are filled with microplastics.

HUMAN HEALTH

We are surrounded by plastic waste that attracts POPs. The human body burden – pollution in everyone, everywhere.

FISCAL

Urban blight, taxpayer burden, plastic beaches and more.

ADDRESSING THE ISSUE

4. DOWNSTREAM WASTE MANAGEMENT

Better collection and recycling systems. “Burn & Bury” infrastructure is not the answer.

3. CONSUMER ENGAGEMENT

Reduce, reuse, recycle, rethink.

2. UPSTREAM DESIGN CHANGE

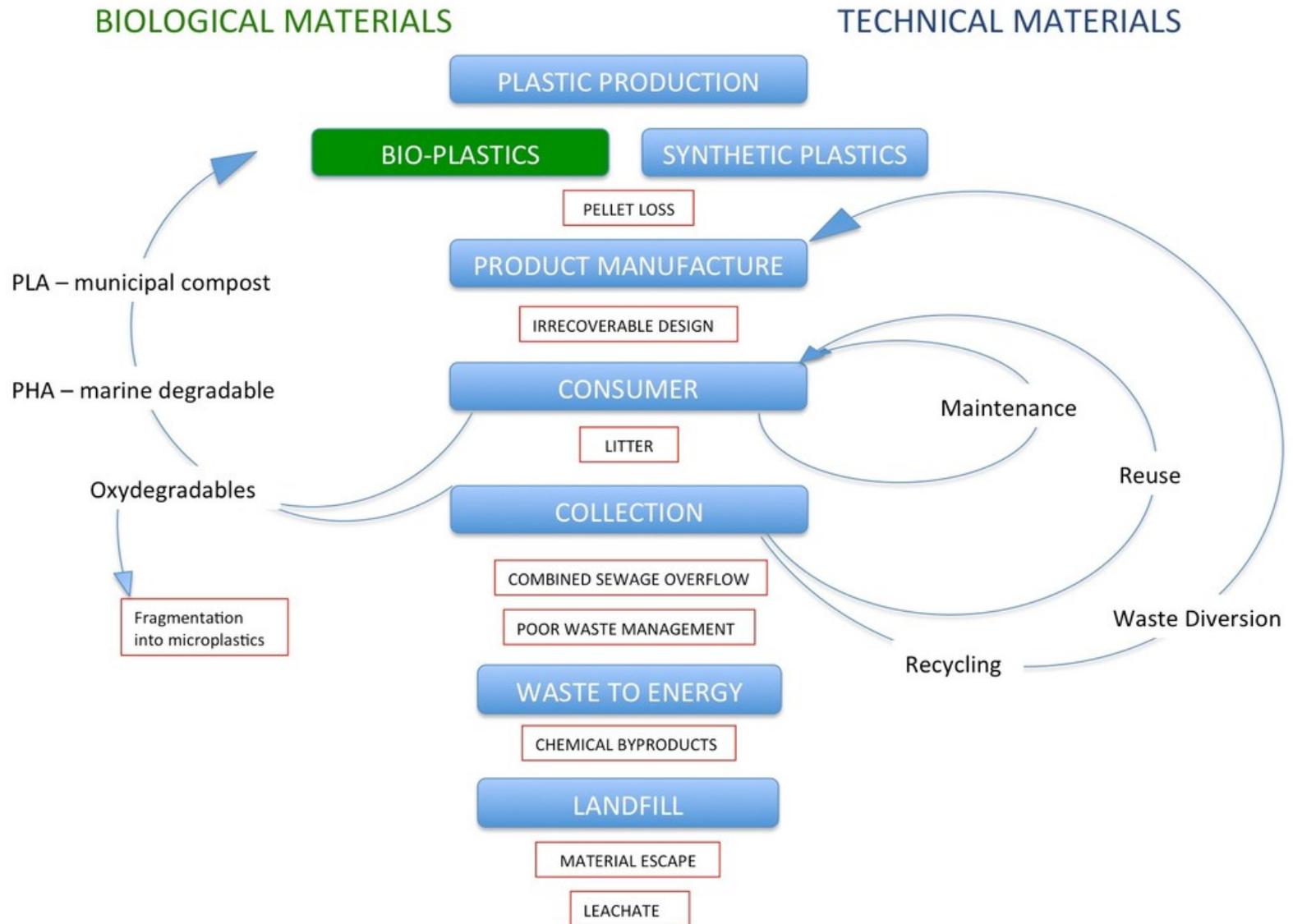
Scale innovations in product and packaging design.

1. POLICY DRIVES SOLUTIONS

Bag bans, microbead laws. Global Plastic Protocol.

WHICH IS BEST?

LINEAR VS. CIRCULAR ECONOMIES



DESIGN & POLICY CHANGE

INNOVATION



SCALE



FEES & DEPOSIT LAWS



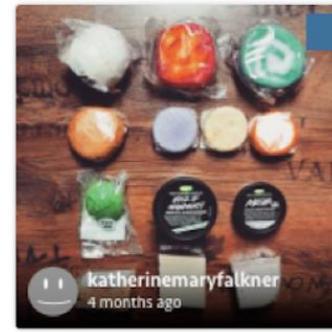
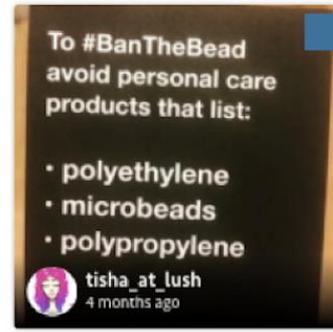
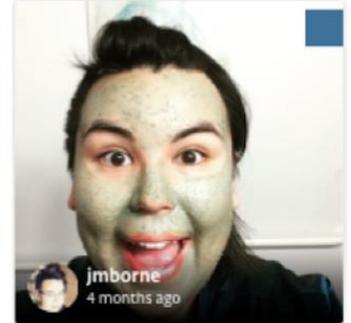
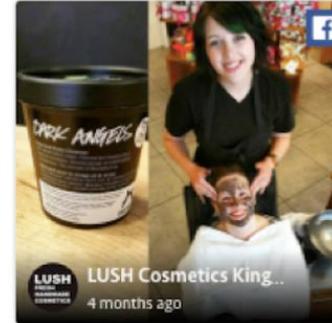
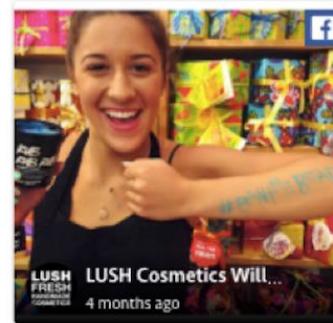
BANS



GLOBAL PLASTICS PROTOCOL

POLICY VICTORY

The Microbead-Free Waters Act of 2015





5 Gyres makes trawls to gather plastic pollution data.





WHAT CAN YOU DO?

MANUFACTURER



REDESIGN

COMPANY, RETAILER,
RESTAURANT



REVIEW, RETHINK,
REWARD

CONSUMER



REDUCE, REUSE,
REFUSE, RECYCLE
REMIND

MORE OCEAN. LESS PLASTIC.



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