

# Zero Waste, Organics & Climate Change

Linda Christopher

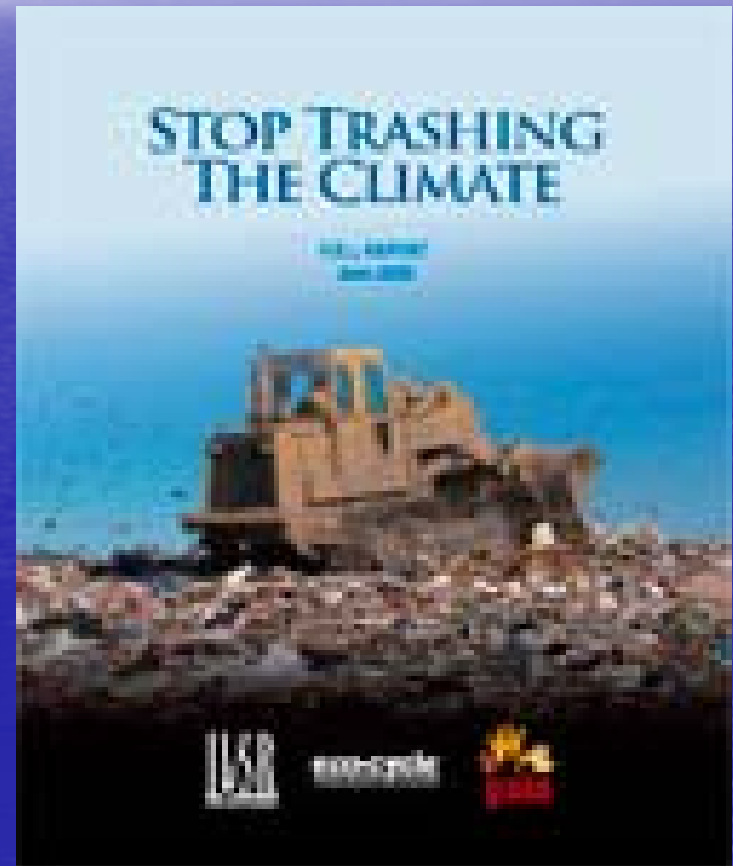
GrassRoots Recycling Network

[www.grrn.org](http://www.grrn.org)

# Zero Waste, Organics & Climate Change



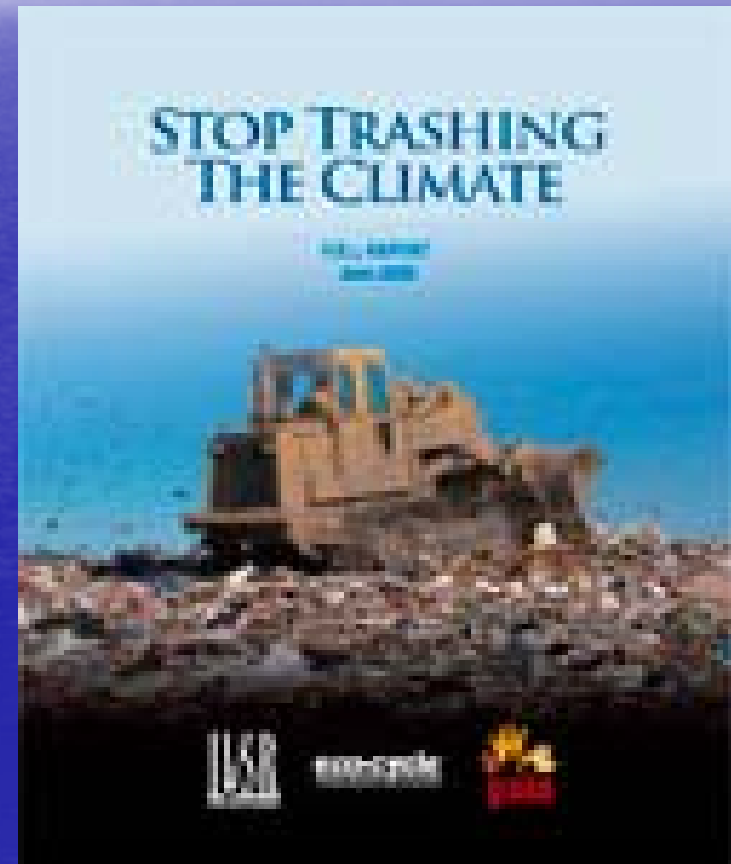
# Wasting = Climate Change



# Wasting = Climate Change

US consumes 1/3 of  
the world's timber

Deforestation = 30%  
GHG emissions

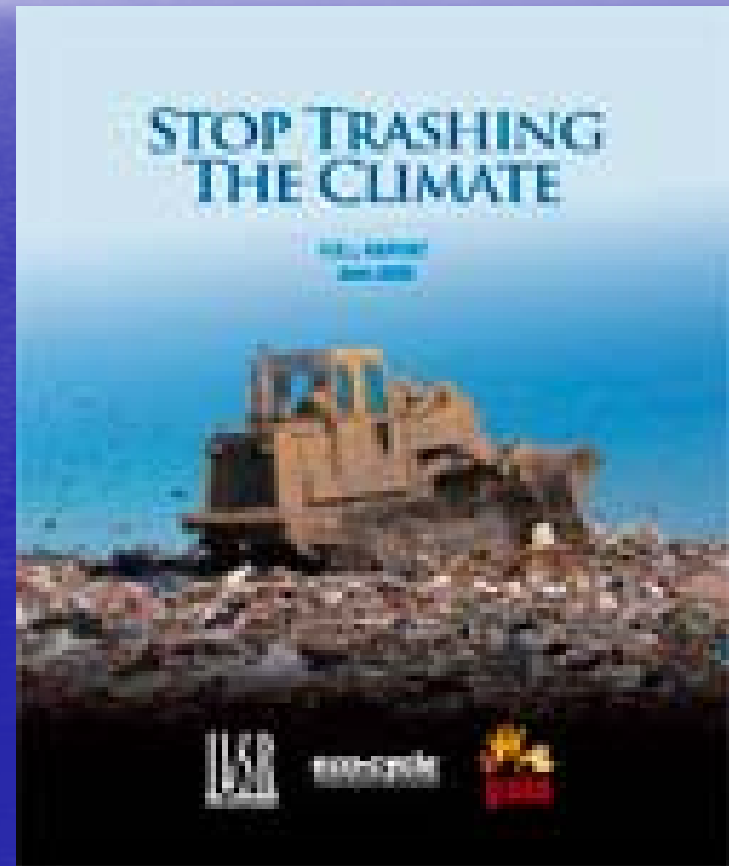


# Wasting = Climate Change

US = 5% World Population

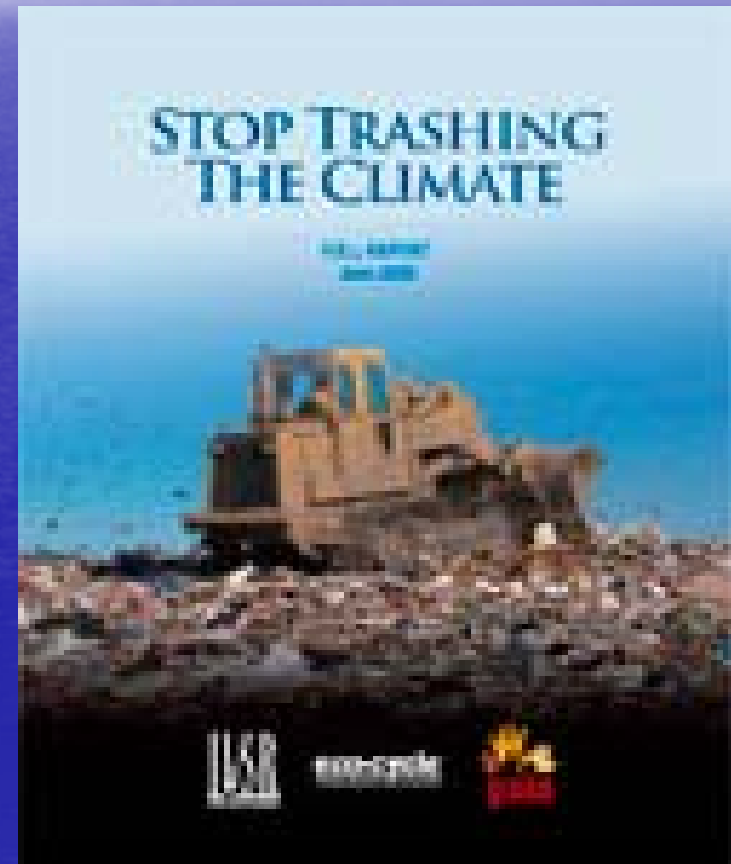
US = 22% GHG

US = 30% World's Waste



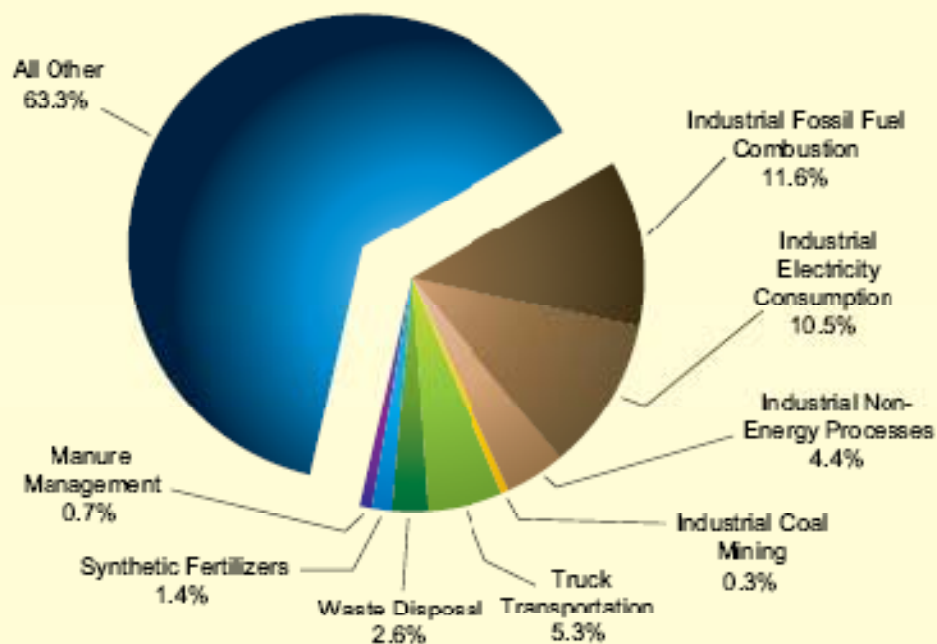
# Wasting = Climate Change

- Mining
- Deforestation
- Transportation
- Industrial Processing
- Manufacturing



# Wasting = 36.7% U.S. Greenhouse Gas Emissions

Figure ES-3: Wasting Is Linked to 36.7% of Total U.S. Greenhouse Gas Emissions, 2005



Source: Institute for Local Self-Reliance, June 2008. Based on data presented in the *Inventory of U.S. Greenhouse Gas Emissions and Sinks, 1990-2005*, U.S. EPA, Washington, DC, April 15, 2007. Industrial Electricity Consumption is estimated using Energy Information Administration 2004 data on electricity sales to customers. See Table ES-1, *Electric Power Annual Summary Statistics for the United States*, released October 22, 2007, and available online at: <http://www.eia.doe.gov/oneaf/electricity/epa/epates.html>. Waste disposal includes landfilling, wastewater treatment, and combustion. Synthetic fertilizers include urea production. All data reflect a 100-year time frame for comparing greenhouse gas emissions.

Source: Stop Trashing the Climate , ILSR, June, 2008

# Zero Waste = Climate Protection

**Table ES-1: Greenhouse Gas Abatement Strategies: Zero Waste Path Compared to Commonly Considered Options** (annual reductions in greenhouse gas emissions by 2030, megatons CO<sub>2</sub> eq.)

Greenhouse Gas Abatement Strategy	Annual Abatement Potential by 2030	% of Total Abatement Needed in 2030 to Stabilize Climate by 2050 <sup>1</sup>
<b>ZERO WASTE PATH</b>		
Reducing waste through prevention, reuse, recycling and composting	406	7.0%
<b>ABATEMENT STRATEGIES CONSIDERED BY MCKINSEY REPORT</b>		
<b>Increasing fuel efficiency in cars and reducing fuel carbon intensity</b>	<b>340</b>	<b>5.9%</b>
Improved fuel efficiency and dieselization in various vehicle classes	195	3.4%
Lower carbon fuels (cellulosic biofuels)	100	1.7%
Hybridization of cars and light trucks	70	1.2%
<b>Expanding &amp; enhancing carbon sinks</b>	<b>440</b>	<b>7.6%</b>
Afforestation of pastureland and cropland	210	3.6%
Forest management	110	1.9%
Conservation tillage	80	1.4%
<b>Targeting energy-intensive portions of the industrial sector</b>	<b>620</b>	<b>10.7%</b>
Recovery and destruction of non-CO <sub>2</sub> GHGs	255	4.4%
Carbon capture and storage	95	1.6%
Landfill abatement (focused on methane capture)	65	1.1%
New processes and product innovation (includes recycling)	70	1.2%
<b>Improving energy efficiency in buildings and appliances</b>	<b>710</b>	<b>12.2%</b>
Lighting retrofits	240	4.1%
Residential lighting retrofits	130	2.2%
Commercial lighting retrofits	110	1.9%
Electronic equipment improvements	120	2.1%
<b>Reducing the carbon intensity of electric power production</b>	<b>800</b>	<b>13.8%</b>
Carbon capture and storage	290	5.0%
Wind	120	2.1%
Nuclear	70	1.2%



# Zero Waste = Climate Stabilization

- Zero Waste Path 7.0%
- Fuel Efficiency 5.9%
- Expanding Carbon Sinks 7.6%
- Industrial Sector 10.7%
- Buildings & Appliances 12.2%
- Electric Power Production 13.8%

# Landfills



# Landfills = Methane



**Landfills = Methane**  
**Methane = 72x carbon**



**Methane = 72x carbon**  
Compostable Materials = Methane



Methane = 72x carbon

Compostable Materials = Methane



# Methane = 72x carbon

Landfill Methane = 21% of US Coal-Fired Plants





## Compostable Organics Out of Landfills

Eliminates the largest source of  
human-produced methane



# STOP TRASHING THE CLIMATE



Existing technologies are not enough

Immediate change is needed

This means simple things have added urgency. What could be simpler than composting and organics recycling?

Methane is an excellent target for short-term climate change mitigation:

72x carbon

9-12 years in the atmosphere

# STOP TRASHING THE CLIMATE



A Zero Waste Strategy preventing waste, maximizing reuse, composting, and expanding recycling is the *fastest and easiest way to reduce our carbon footprint and stabilize the climate.*



**COOL 2012**  
**Compostable Organics Out of Landfill by 2012**

**COOL = Prevent methane**

**COOL = Healthy Soils**



**COOL 2012**

**Compostable Organics Out of Landfill by 2012**

**COOL = Prevent methane**

**COOL = Healthy Soils**

**Soils = 2x carbon as biomass**

# STOP TRASHING THE CLIMATE



Clay recycles 90% of his discards.

If we all did the same, greenhouse gas emissions would be reduced the equivalent of shutting down 21% of all U.S. coal-fired power plants.

**ZERO WASTE**  
**IT'S HIS FUTURE. IT'S OUR CHOICE.**

[www.stoptrashingthecolimate.org](http://www.stoptrashingthecolimate.org)

# Stop Trashing the Climate

Institute for Local Self-Reliance

June, 2008

[www.StopTrashingtheClimate.org](http://www.StopTrashingtheClimate.org)

**STOP TRASHING THE CLIMATE**

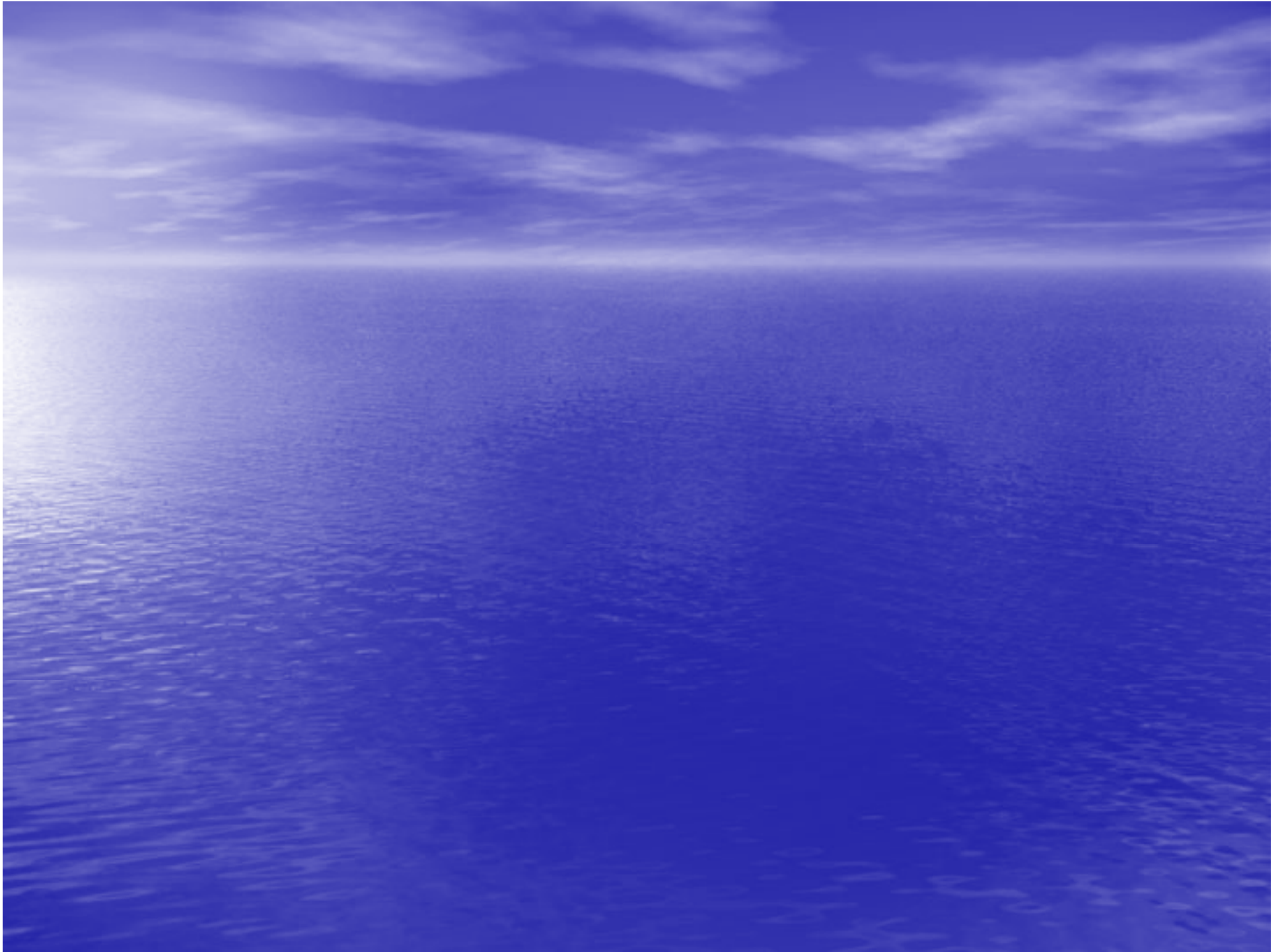




# Compostable Organics out Landfill by 2012

GRRN and BioCycle Magazine

[www.cool2012.org](http://www.cool2012.org)





# GrassRoots Recycling Network

[www.grrn.org](http://www.grrn.org)

Zero Waste Community Planning

Zero Waste Business Profiles

Zero Waste Business Principles



# GrassRoots Recycling Network

[www.grrn.org](http://www.grrn.org)

Zero Waste Community Planning

[www.zeroheroes.biz](http://www.zeroheroes.biz)

Zero Waste Business Profiles

Zero Waste Business Principles

# Wasting = Climate Change

One ton at the curb  
= 71 tons upstream

