

5 | 1969  
2019



**Nampak**  
packaging excellence

# Environmental pressures on packaging: Some inconvenient realities

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March 2019



# Packaging is not waste...

It is part of the solution

Source: CSIR, WWF, Statistics SA

1



## 30%

of all food produced in South Africa is lost or wasted annually.

2



## R66.7bn

extrapolated loss in 2018, valued by CSIR (~2% of GDP) in 2013.

3



## R21.7bn

average annual cost of household food waste in South Africa.

4



## 12m (~20%)

of all South Africans go to bed **hungry** every night.

**"As much as half of all food grown globally is lost or wasted before and after it reaches the consumer."**

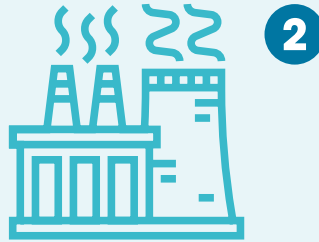
# Packaging reduces food waste going to landfills

Source: CSIR, WWF, Statistics SA

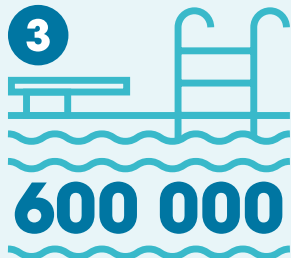
## Resources used in food production are wasted



of SA's scarce water is used for irrigation.



Energy to produce wasted food could power JHB for **16 weeks.**

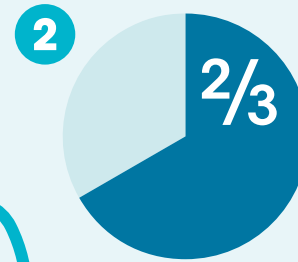


Olympic-sized swimming pools can be filled with the water from producing wasted food.

## Environmental impact



of SA's waste ends up in landfill sites.



contains biodegradable organic waste, releasing CO<sub>2</sub> and methane.



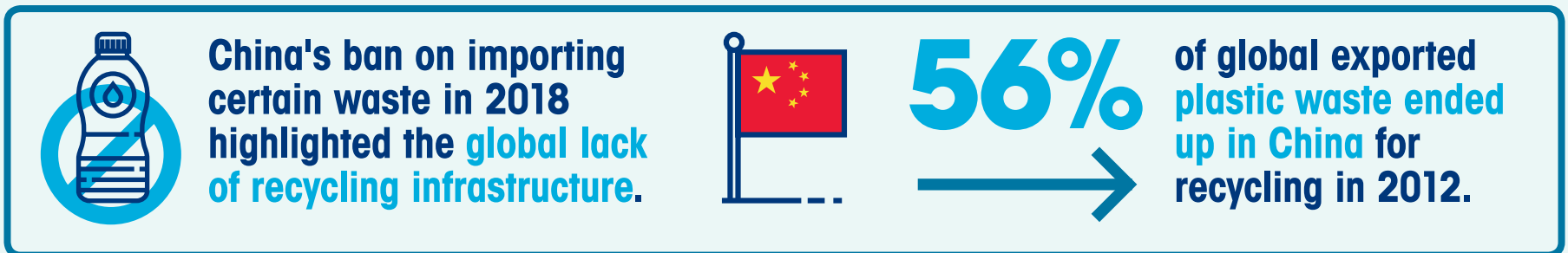
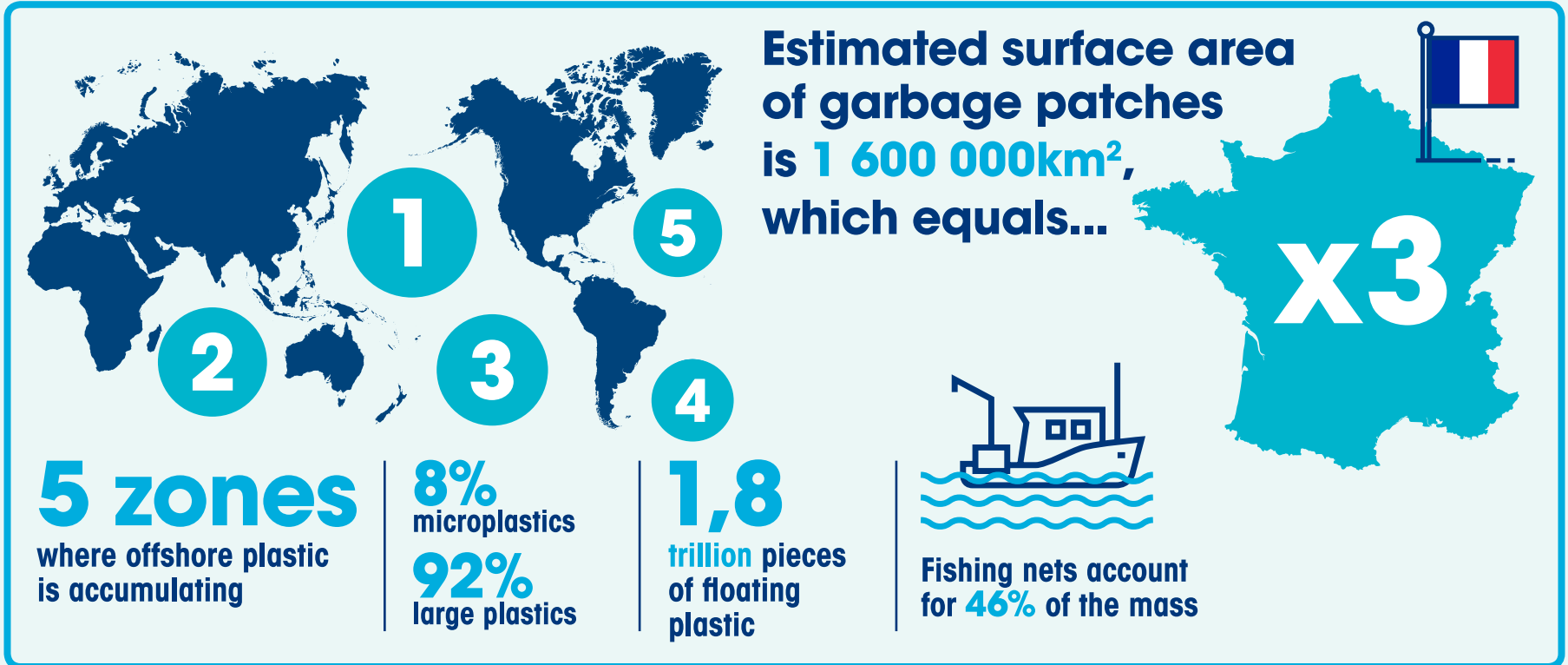
Emissions from production, transportation and storage to bring food to end-consumer over life-cycle.

**With a key role in optimising food supply, packaging is part of the solution, not the problem, if handled properly after use.**

# ...but we have a problem.

Great Pacific Garbage Patches raised environmental awareness

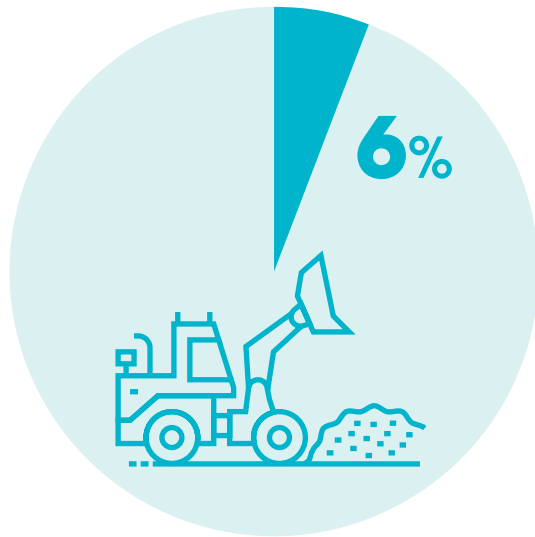
Source: The Ocean Cleanup Foundation



# Packaging is a modest part of the waste challenge

Source: Packaging SA

## Waste



**6%**

of SA's waste sent to landfill sites comes from packaging.

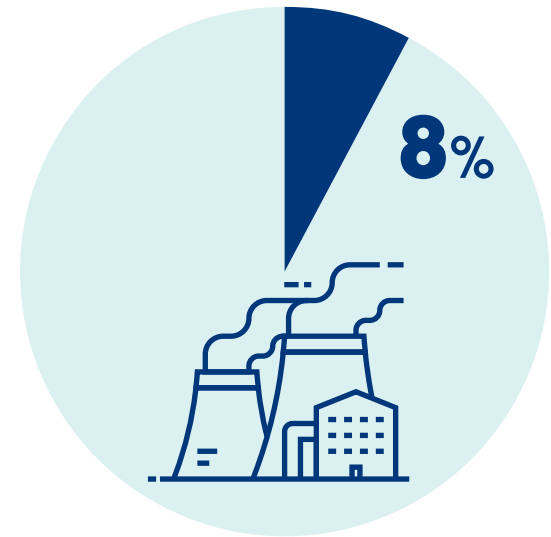
## Weight



**9%**

of the weight of the packaged product is packaging.

## Energy



**8%**

of the energy required to produce and deliver all products to the household is used by packaging.

# Commitment to review use of packaging

Major brand-owners and retailers committed to reduce plastic use

5

## Major users of packaging moving away from use of plastic



### Vision:

**World without waste**

### By 2020:

Plan to use **PlantBottle™** packaging for all PET bottles

### By 2025:

Offer **100% recyclable** packaging

### By 2030:

Create packaging with at least **50% recycled material**  
Collect and **recycle a bottle or can for every one sold**

## WOOLWORTHS

### Vision:

**ZERO packaging waste to landfills**

### By 2020:

**No plastic shopping bags** – phasing out single-use plastics

**Lightweight plastic bag levy** introduced in 2003 has not curbed consumption. In WC: piloting cheaper locally-made reusable bags from recycled material

### By 2022:

**All packaging recyclable or reusable**

Other active brand owners include:



# Beverage cans

1

Aluminium is  
valuable...

**R600m**

into SA economy by  
converting from steel  
to aluminium cans.

**Valuable**

to informal sector  
collecting cans  
for recycling.

2

Aluminium is  
infinitely recyclable...

**>90%**

recycling rates and  
increasing each year.

**78%**

of aluminium ever produced  
still in circulation.

**95%**

energy savings than for  
primary conversion.

3

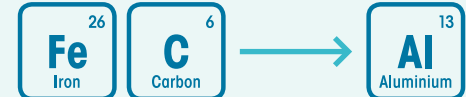
Aluminium is  
lightweight...

**5% - 6%**

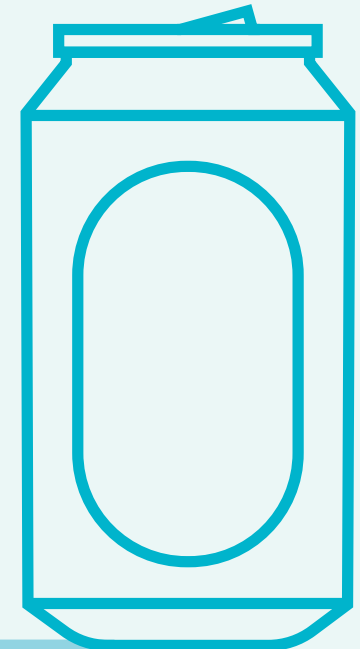
Bevcan weight reduction  
on 330ml slender  
and 500ml cans.

**1 320 tons**

of raw materials  
spared, saving  
R62m.



From 2012 all beverage  
cans converted from  
steel to aluminium.



# Paper is re-emerging as a substrate of choice for liquid packaging

## Paper

### 1 Paper

**~66%**  
recycling rates.

**~100%**  
recycled from  
corrugated cardboard  
and shredded paper.

### 2 Cartons

**Renewed**  
interest from consumers  
for innovative new  
products.

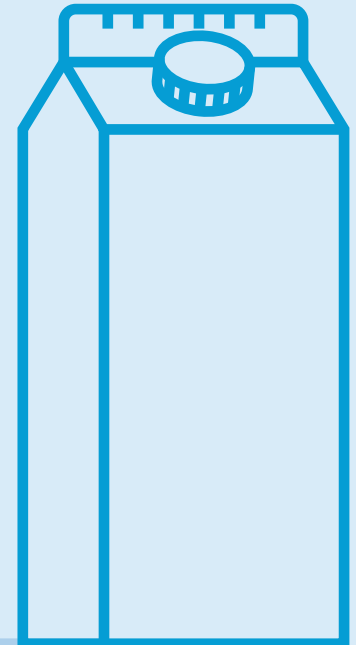
**87%**  
from renewable  
sources, also  
eco-friendly and  
cost competitive.

**<50%**  
GHG emissions vs  
PET and HDPE bottles.

**~30% - 40%**  
improved recycling  
rates expected.



**New, growing trees  
absorb more CO<sub>2</sub>  
than older trees.**





## Rigids

1

Plastic is  
lightweight...

**14% - 44%**

weight reduction in  
500ml PET bottles  
(~20% in bottles >500ml).

**2 900 tons**

PET raw materials  
saved in 2018.

2

Plastic has  
positives...

**~ >50%**

of PET is recycled,  
leading HDPE and  
other polymer variants.

**Flexibles**

high product-to-  
package ratio and  
extended shelf-life  
of food.

3

Plastic is  
recyclable...

**~45%**

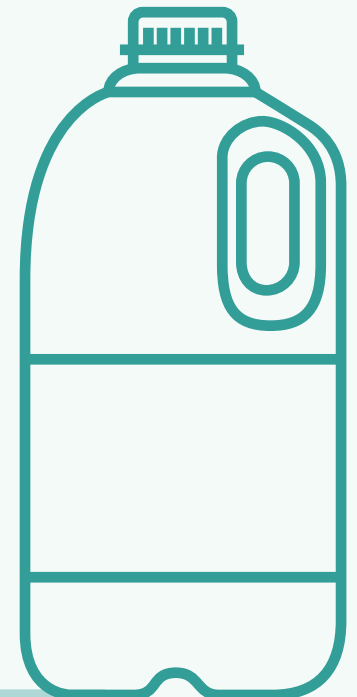
plastic recycling  
rates as SA invests  
in recycling assets.

**~43%**

better than global  
recycling rates.



Majority of single-  
use plastics end up  
in landfill sites



# Ultimately we must use and collect end packaging responsibly...

Reduce, reuse, recycle

9

## Job creation

### 1 Design

- ▶ **Benefits of lightweight**
  - ▶ Environmental impact reduced compared to steel (water and energy savings)
  - ▶ Lightweight HDPE bottles are easy to transport
- ▶ **Packaging is reusable**

### 2 Collection

- ▶ **Increase of collection rates**
  - ▶ No waste collection for 31% of households
- ▶ **Separation at source**
- ▶ **Higher recycling rates**
  - ▶ Multiple use of PET bottles with 100% recycled content
- ▶ **Recycled materials:**
  - ▶ Lower carbon footprint
  - ▶ Save scarce resources

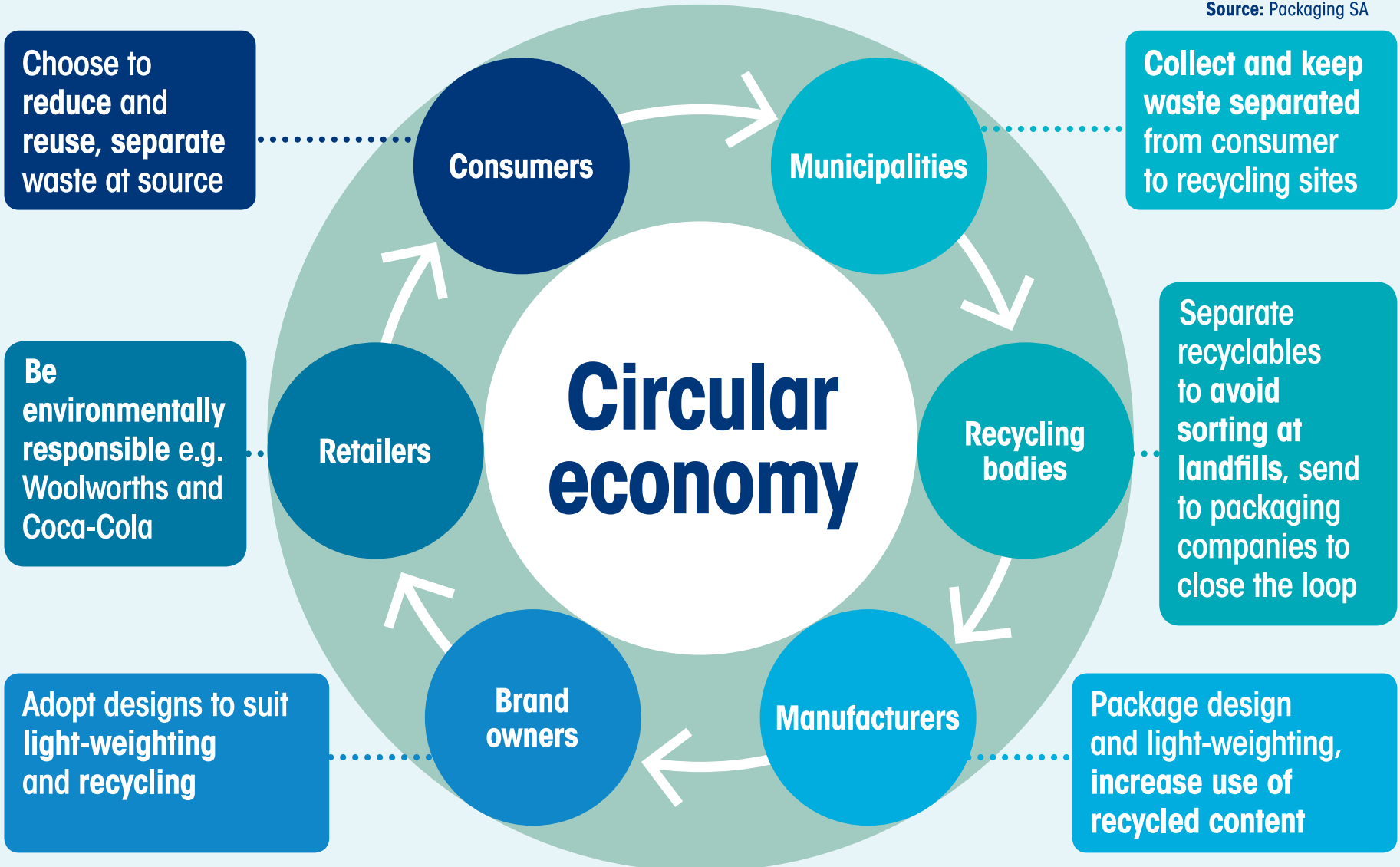
### 3 Close the loop

- ▶ **Increase recycled content in manufacturers' raw materials input**
- ▶ **Reduced waste extends lives of landfill sites**

# Packaging waste is not (only) a producer problem

...we all have a role to play

Source: Packaging SA



# Local industry is doing a world-class job

Source: Packaging SA, BMI, Nampak analysis, Resource Recycling Systems, PAMSA

## Producer responsibility organisations include:

### 1 Metal



Recycling rate	<b>&gt;90%</b>
Global rate	<b>69%</b>

### 2 Plastics



Plastics | SA



Recycling rate	<b>46%</b>
Global rate	<b>43%</b>

### 3 Paper



Recycling rate	<b>66%</b>
Global rate	<b>58%</b>

### 4 Glass



Recycling rate	<b>44%</b>
Global rate	<b>46%</b>

# Recent developments expected to improve recycling rates

**1** City of Johannesburg recently introduced separation at source.



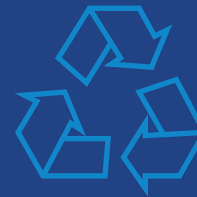
**2** Further rollout of PACKA-CHING trailers in Johannesburg.



**3** New cartons recycling plant in Springs: Improve recycling rate from ~20% to ~30% – 40%.



**4** Packaging SA – ERP Plan to increase recycling rates over five years.



**1**

- ▶ **SA's recycling voluntary programmes work well, initially funded and promoted by packaging producers**
- ▶ **Recycling PROs run on a break-even-basis and generally self-funded**

**2**

- ▶ **Regulations propose Waste Bureau be funded by packaging producers**
- ▶ **Unintended result of levy**
  - ▶ Packaging producers may pull back on voluntary programmes
  - ▶ Collapse of recycling circular economy
  - ▶ Worst affected will be 60 000 to 90 000 informal waste collectors/sorters who enable and are majority of recycling programmes

# Thank you