

# Waste recycling and secondary resources?

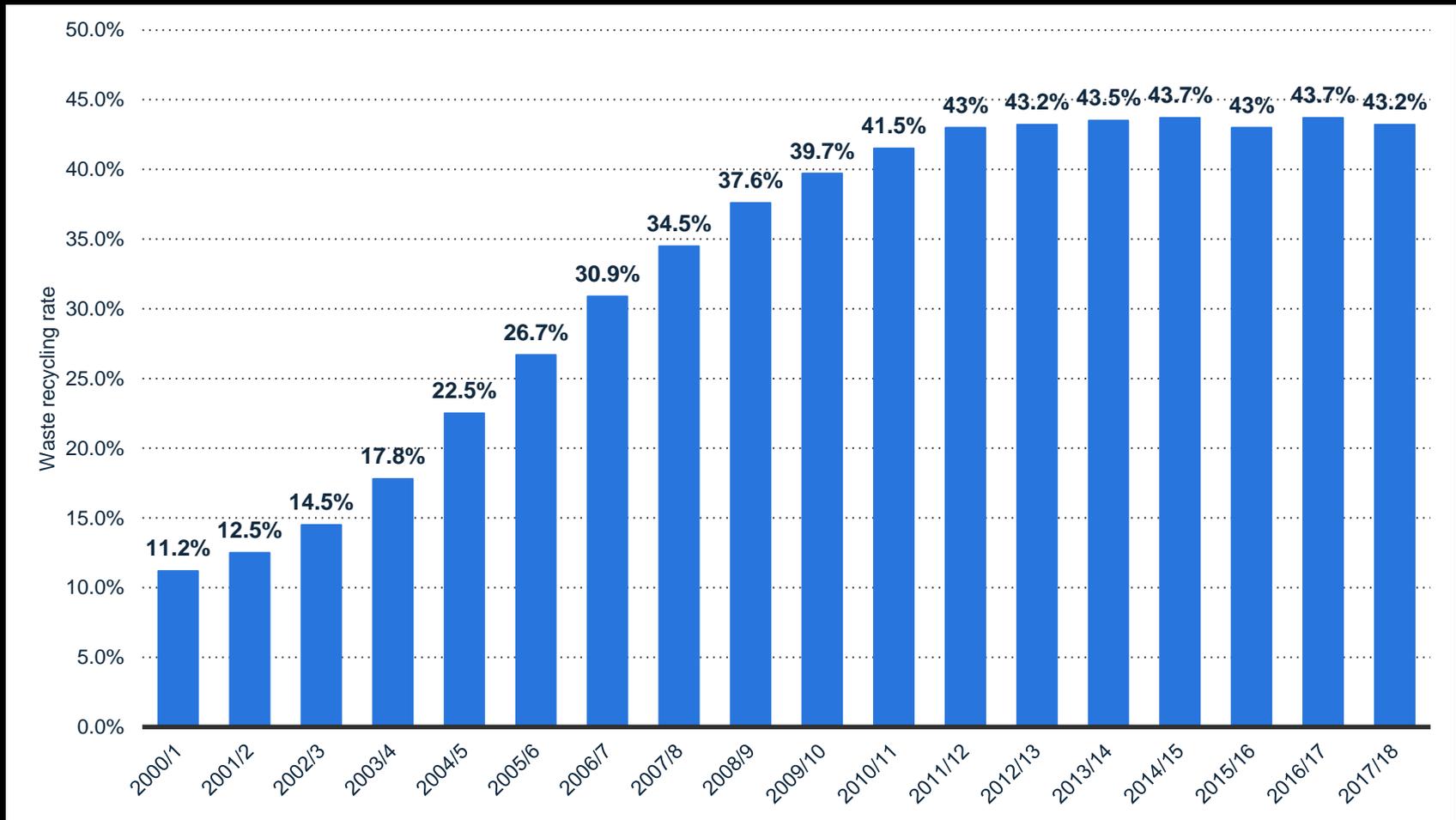
Mike Crang



# Current shift in thinking

- From Waste diversion, waste reduction
  - Diversion from landfill
  - End of the pipe
- To creating secondary resources
  - Circular economy
  - Markets for materials

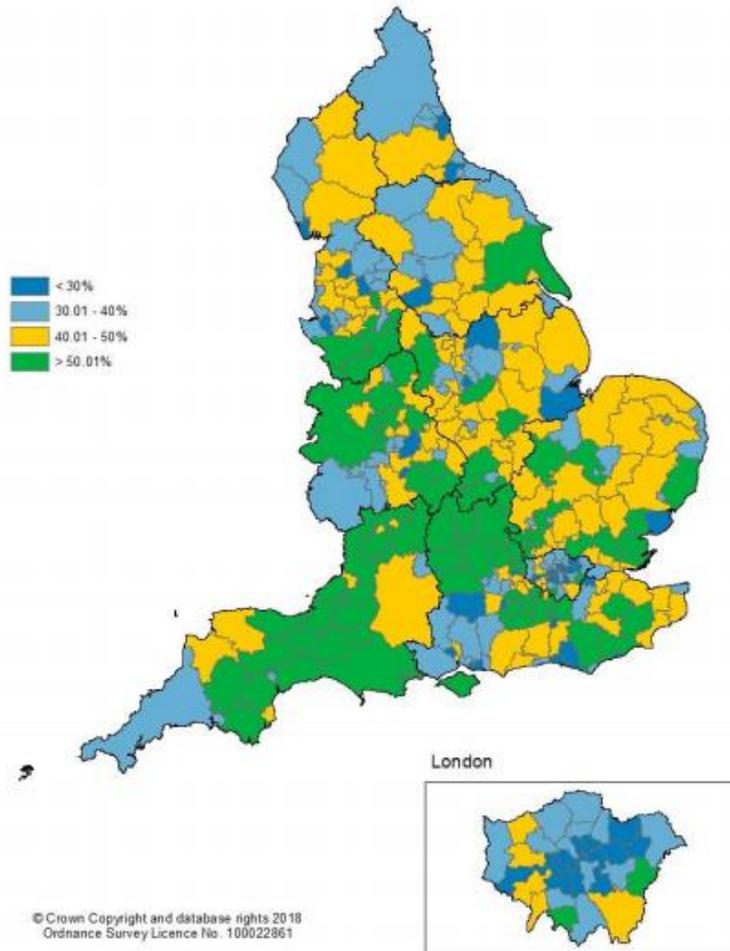
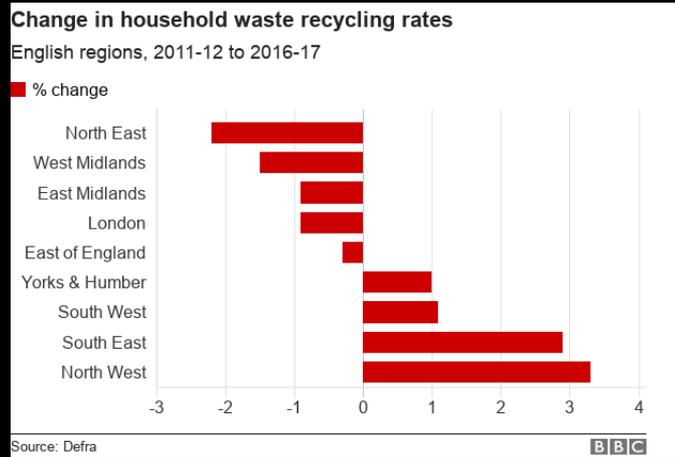
# Household waste recycling rate in England from 2000 to 2018



**Note:** United Kingdom (England); 2000 to 2018  
Further information regarding this statistic can be found on [page 8](#).  
**Source(s):** Defra; GOV.UK; [ID 444744](#)

# England municipal recycling rates 2017/18

Figure 7: Map of Household Waste recycling rates for individual local Authorities in England 2017/18



# Miljöstuga



# Governing subjects: kalsortering

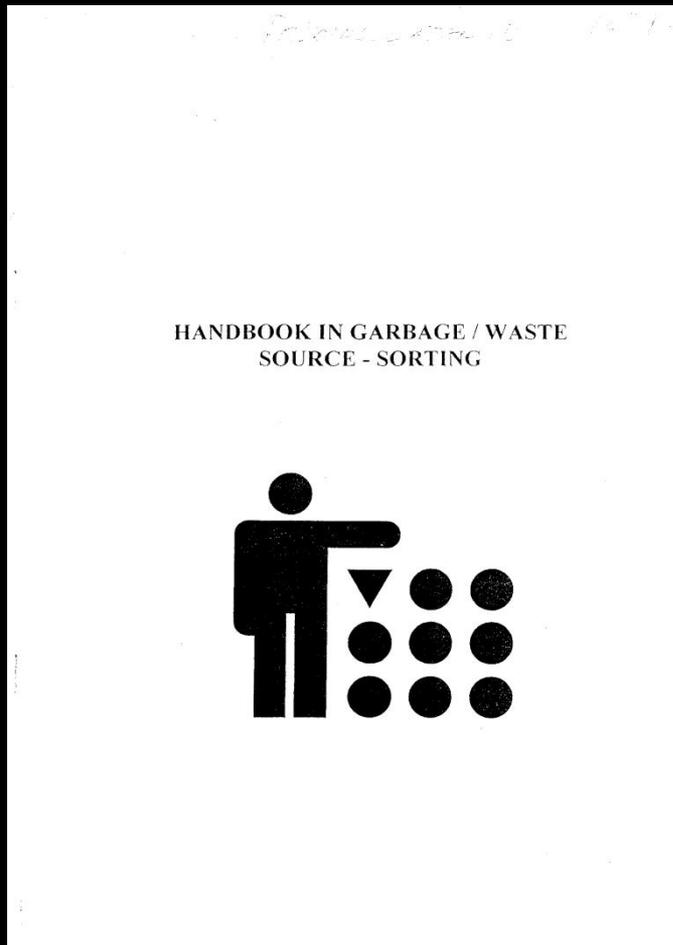


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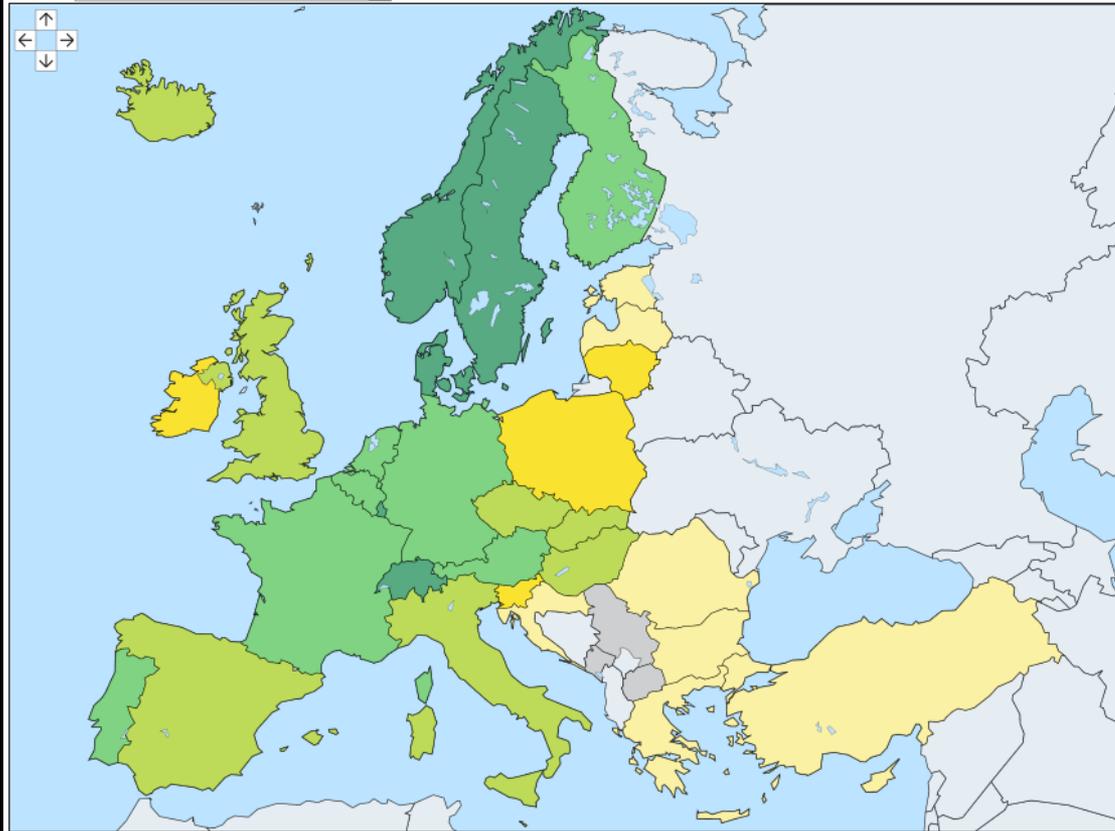
# Incineration in EU

## Municipal waste generation and treatment, by type of treatment method

kg per capita

Municipal waste consists to a large extent of waste generated by households, but may also ... [more](#)

wst\_oper Total incineration (including energy recovery)



Types | Data | Classes | Layers | Hide toolbox

Map Type

- Coloured Map
- Symbol Map by size
- Colour with: black
- Symbol Map by color

Comparison

- No Comparison
- Compare with geo: EU (28 countries)
- Compare with time: 2011
- Compare with value

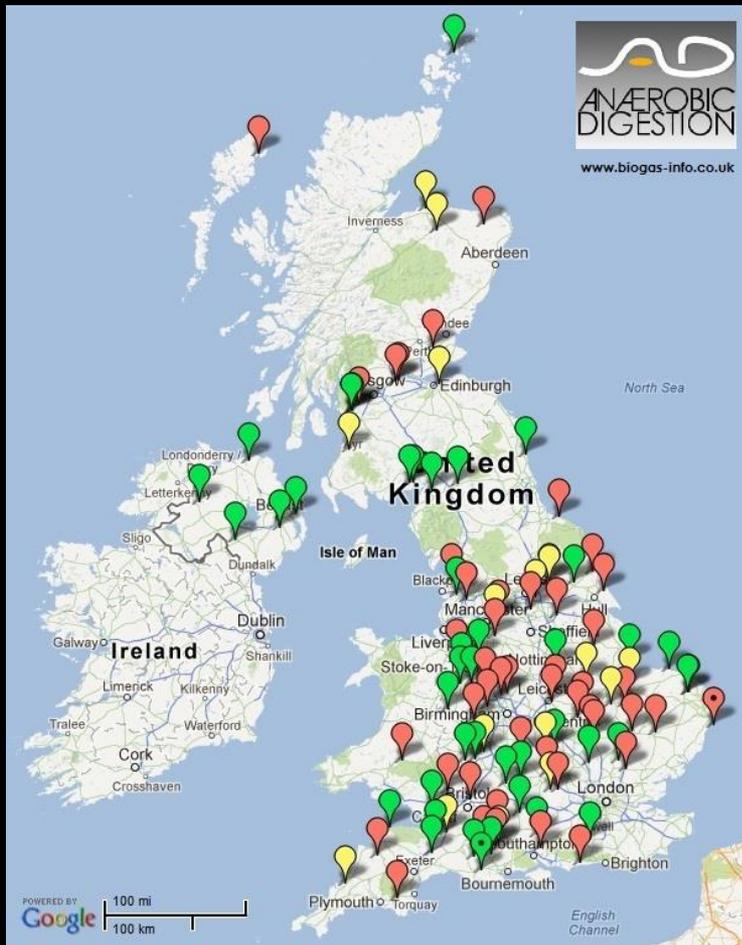
Refresh

Data for 2011

Legend	Cases
0.0 - 0.0	9
0.0 - 27.0	5
27.0 - 88.0	7
88.0 - 220.0	7
220.0 - 387.0	5
Data not available	2

Minimum value:0.0  
Maximum value:387.0

# Biogas production



- Food waste post foot and mouth
- AD plants
- Electricity feed in tariff
- Low thermal level
- Vs certified inputs/ agricultural system
- ? Digestate output

# Market for materials



**Tack för maten!**  
Methanogenium cariaci\*

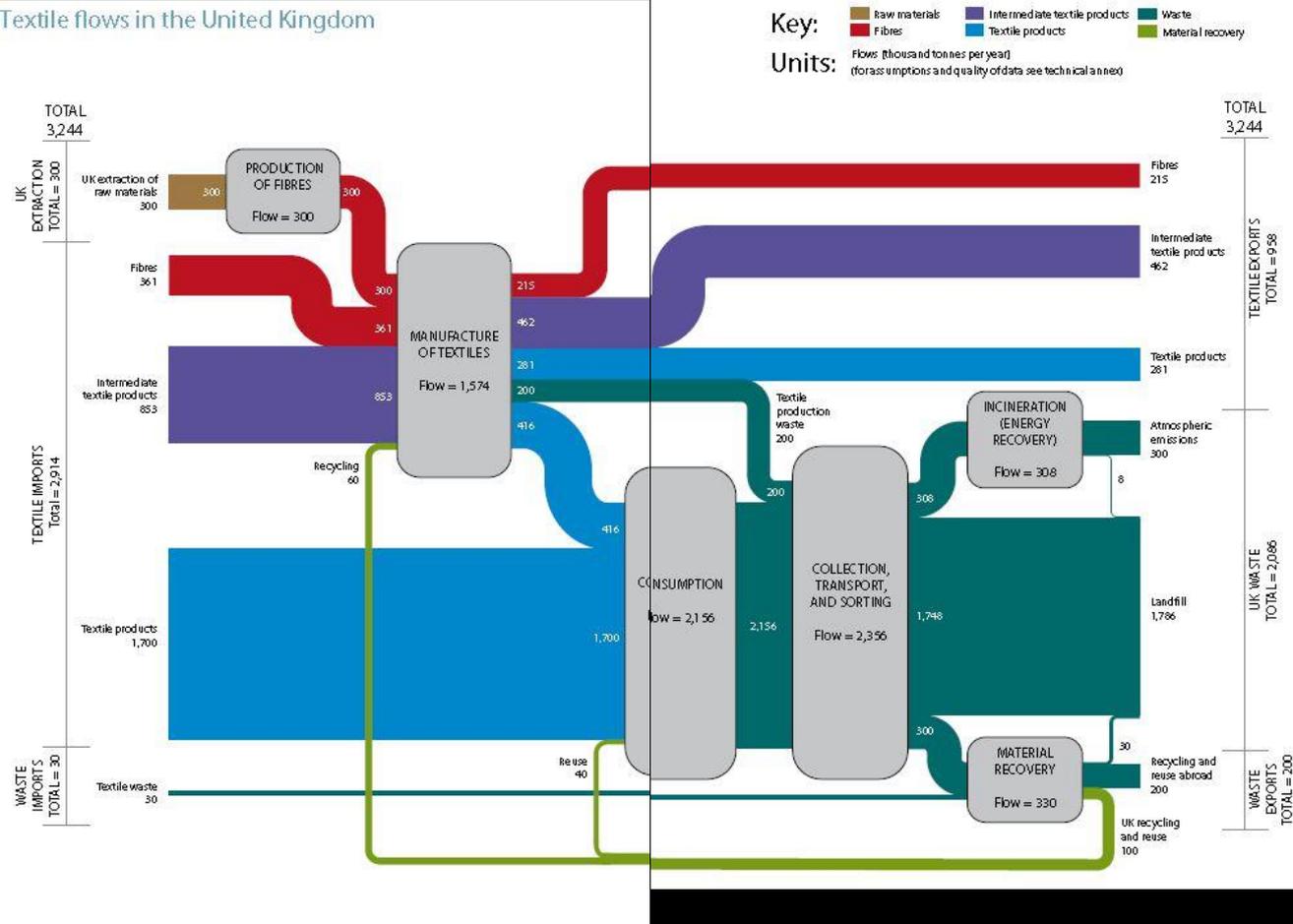
Tepåsar, äppelskruvar, fisken, kaffefilter, bananskal, ostkanter... Listan på allt matavfall som du och andra Uppsälabor sorterar kan göras lång. Avfallet går till vår moderna biogasläggning. Där förvandlas det till klimatligt drivmedel för bilar och bussar. Faktum är att vi är en av de bästa kommunerna i landet på att göra biogas av matavfall. Tillbaka till kretsloppet, alltså. Med din hjälp.

Är du osäker på vad som ska sorteras som matavfall? Du får blixtsnabbt svar i vår sorteringsguide på [www.upsalavatten.se](http://www.upsalavatten.se). Välkommen!

\* En av de mikroorganismer som i vår anläggning bryter ned på matavfall, och som tack för hjälpen producerar biogas.

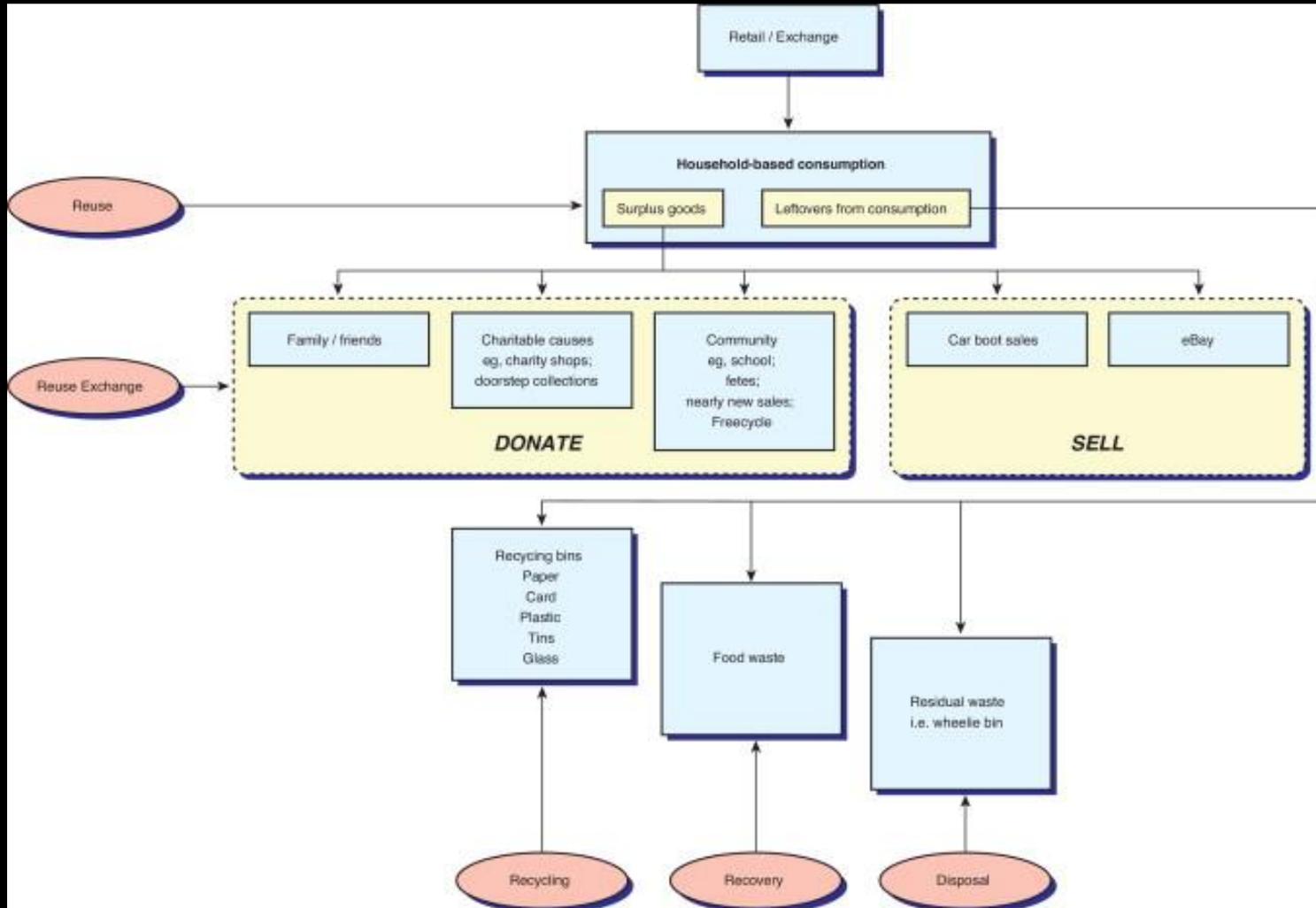
# Material flows: UK textiles

Textile flows in the United Kingdom

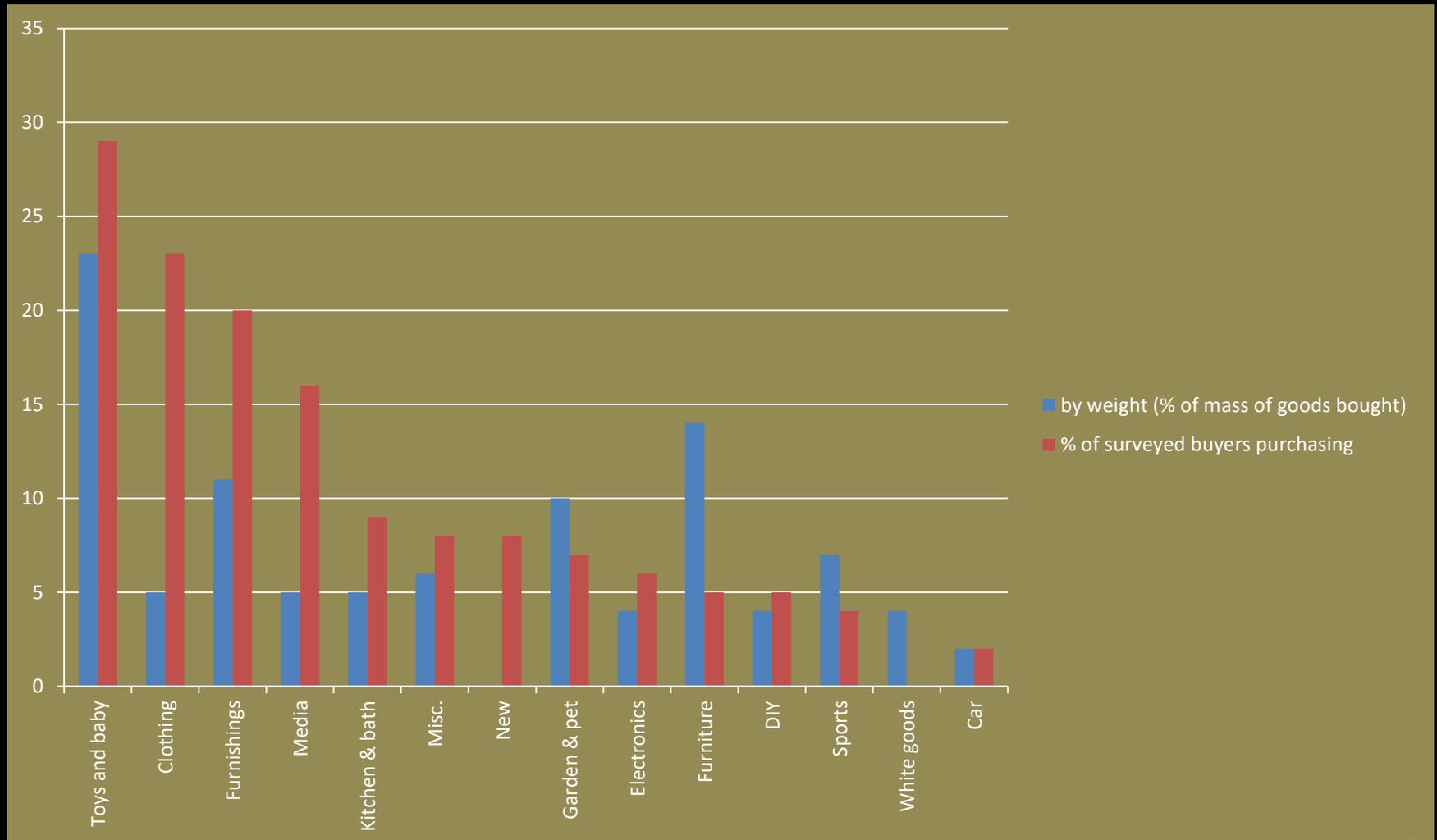


- Over the past 10 years, clothing has been the fastest growing waste stream in the UK.
- Select cttee 2018:
  - 235m garments sent to landfill last year.
  - Recycling charity Textile Reuse & International Development (Traid), of 650,000 tonnes of clothing collected for reuse and recycling in 2014, just 39% suitable for charity shops.
- People dispose of an average of 19 items, 7 going straight in the bin.
  - Women throw away more
  - Men less likely to recycle

# Reuse /exchange



# Purchases by category and weight



# The promise of a Green economy

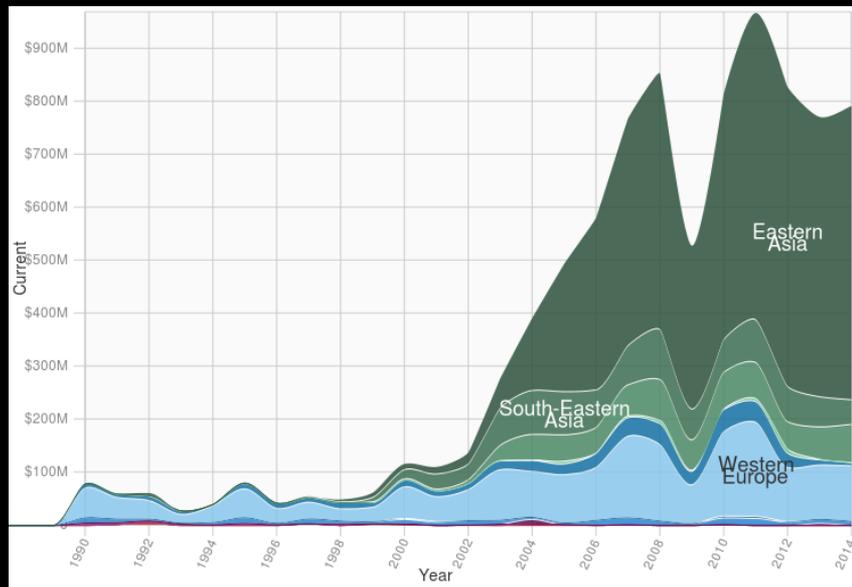
- Discursive claims
- UK alone, expanding recycling could create up to 84,000 jobs in the next decade, possibly located in areas formerly associated with heavy industries (SITA UK, 2012: 4).
- EU as a whole, jobs in recycling related activities grew from 230,000 to 500,000 between 2000 and 2008, at a rate of over 10% per annum (EEA, 2011)
- ?

# Doing the (dirty) work of recycling

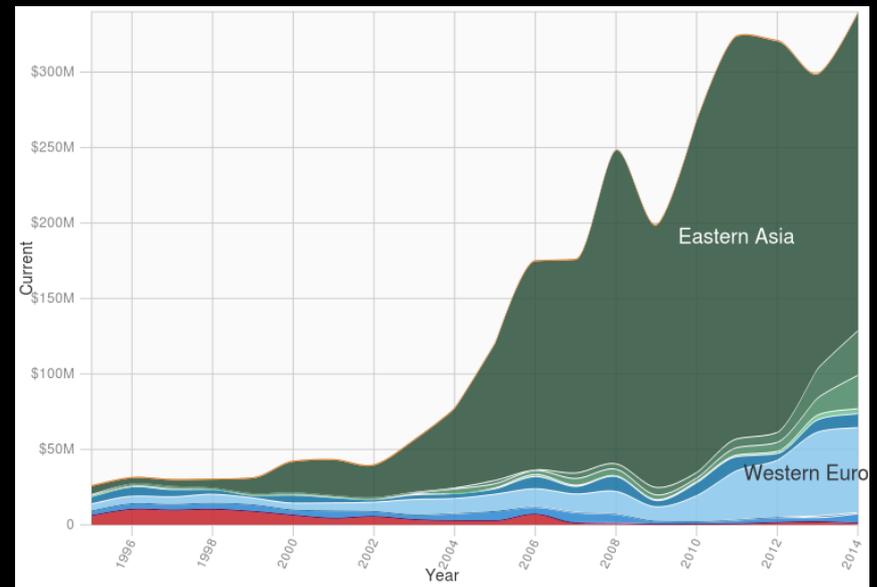
- Consumer 'doing recycling' (UK minimal) sorting
- Kind of jobs/skills
  - separation, sorting and segregation relate to categories, or grades, of materials demanded by producers using the recycled materials.
  - Sorting discarded goods into categories is the means by which value is created in resource recovery.
  - Categories are expressed in terms of the degree of material purity and contamination for any given product.
- waste historically associated with marginal and foreign workers
- Global competition of labour intensive sorting vs UK capital intensive
  - wrong kind of recycling?

# UK exports of scrap

## Recovered paper/paperboard



## Plastic waste





## Stock our shops

### More stock means more care

Our shops raise much needed money to fund the work of our nurses. By filling the enclosed bag you will be ensuring we can continue to care for more people.

Just fill the bag with your unwanted clothing, books, linens and bric-a-brac and leave it on your doorstep on the morning of the day indicated below.

### Thank you for supporting Marie Curie Cancer Care.

Collections will be made from your doorstep

on: 

Mon	Tues	Wed	Thur	Fri	Sat	Sun
-----	------	-----	------	-----	-----	-----

(Please put your sack out before 8am. It will be collected by an authorised collector carrying Marie Curie Cancer Care I.D.):

**WARNING: Plastic bag inside. Please keep away from babies and children.**

Marie Curie Cancer Care provides high quality nursing, totally free, to give people with terminal cancer and other illnesses the choice of dying at home, supported by their families.

[www.mariecurie.org.uk](http://www.mariecurie.org.uk)

Code of Charity Retailing



Association of Charity Shops  
Supporting Charities  
www.charityshops.org.uk  
2010

Marie Curie  
Cancer Care



# Valuing Donation



BCR Global Textiles who help small businesses in Africa, through their textile project they are preventing valuable textiles going to landfill giving them a

new lease of life in developing countries across Africa where bras remain too expensive to produce. BCR are donating

£1,000 to our research for every tonne of bras collected, that's only 9,000 bras! With over 30 million women in the UK you could really help make a difference!

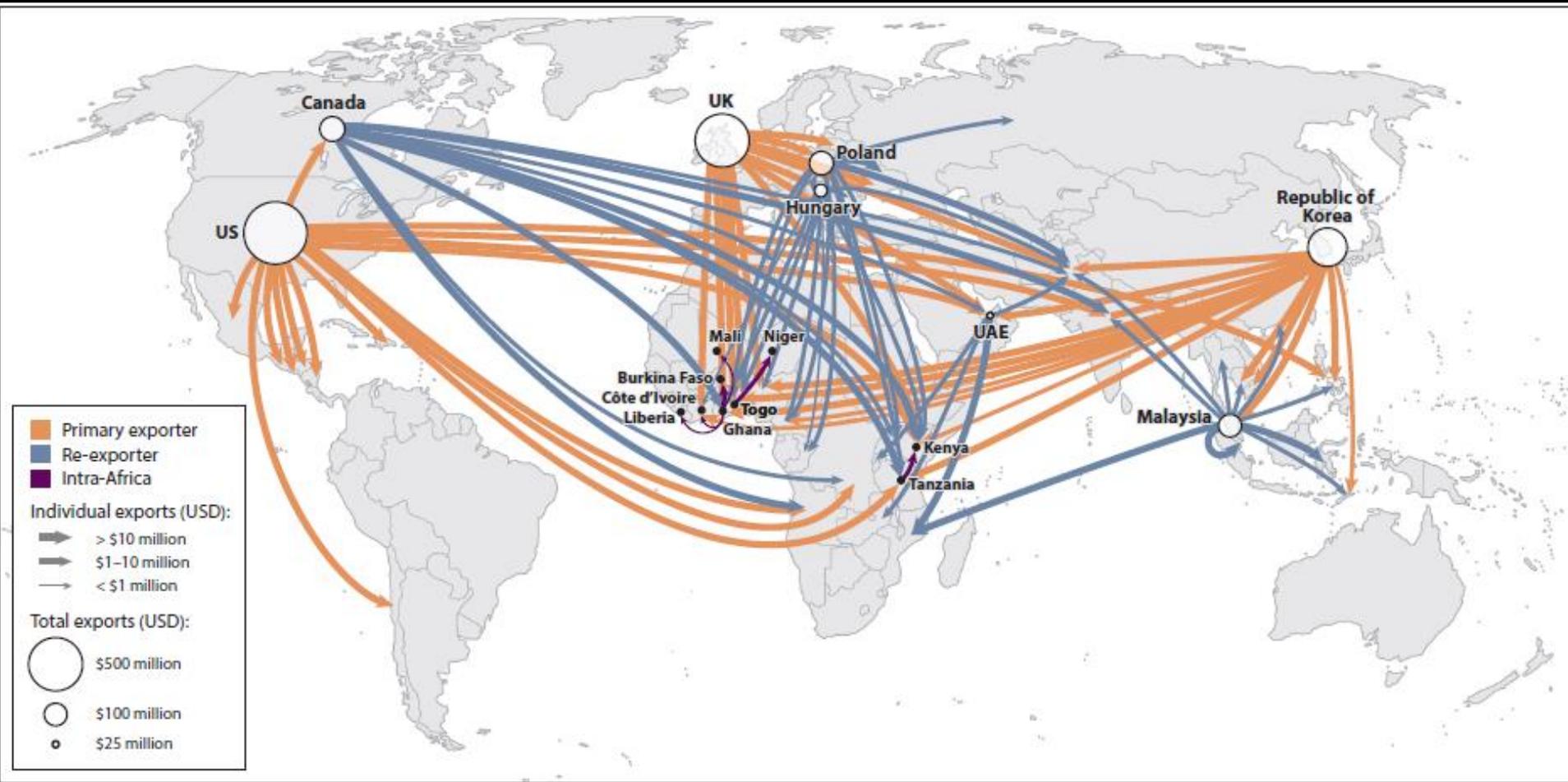
By filling this bag with your unwanted clothes, you can help research for more people like Par. He received vital support from Par, his Macmillan nurse, who made sure he didn't face cancer alone.

Collection day:

**THURSDAY**

Please fill the enclosed bag and leave it outside your door before 8am.

# Flows of Used Textiles



# Baled and Shipped to E European sorting centres



# Sorted and graded



# 400 grades/categories



- Employ people from different countries
- Market knowledge
- Woollens to E Europe, cottons to W Africa
- Climate and cultural norms
- DEMAND



# Africa Reselling



# Prices in West Africa (2011)



- Quality, supply & demand ♀ / ♂ (Per 45kg)
- Polyester blouse £19
- ♀ suit jacket £44
- Child trousers £63
- ♀ tshirt £63
- ♂ tshirt £81
- ♂ suit jacket £88
- ♀ ¾ length trousers £88
- ♀ Cotton blouse £94
- ♂ shirt £100
- Logo Sport shirt £113
- Bras £188

# Changing Tides

China 'upgrading' in GVC/GPN

Internal circular economy

Higher quality inputs

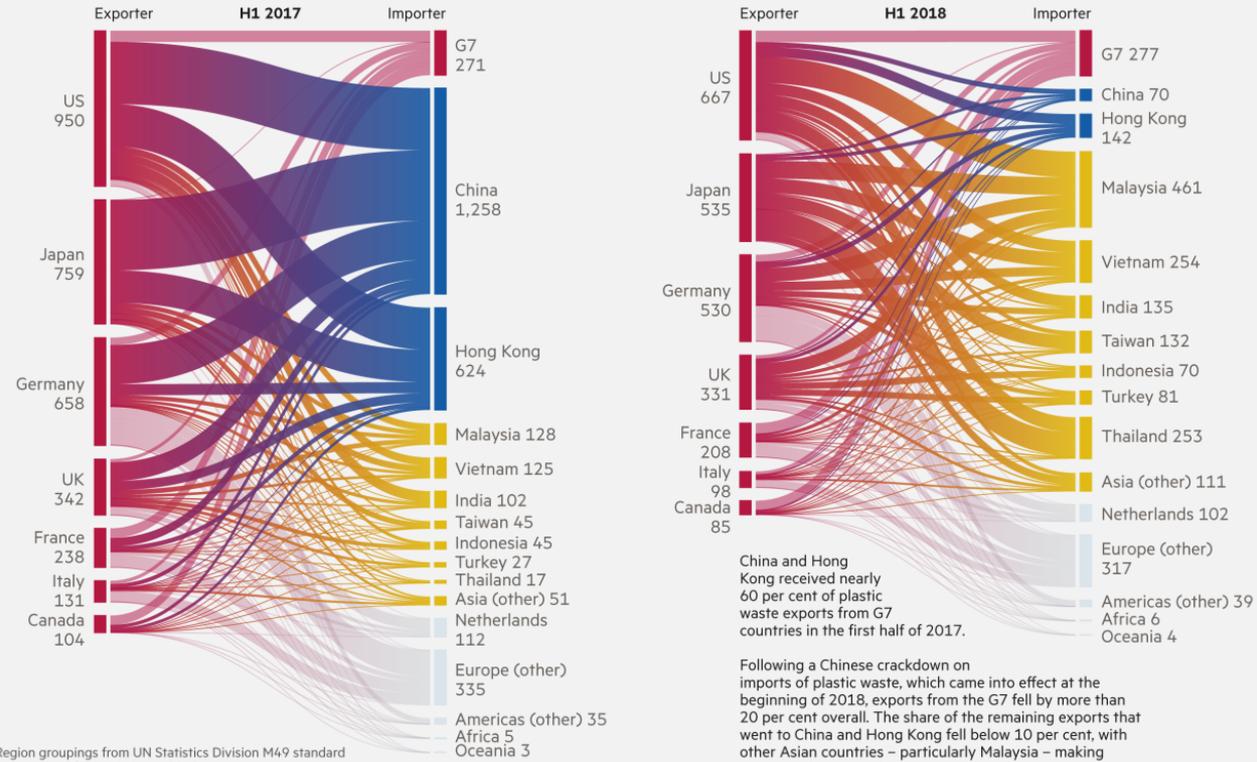
UK waste too contaminated

'Green fence' 2014

2017 closure for 24 categories and via 'purity' criteria

## How the global river of plastic waste changed course in just 12 months

Exports of plastic waste, parings and scrap from G7 countries ('000 tonnes)



China and Hong Kong received nearly 60 per cent of plastic waste exports from G7 countries in the first half of 2017. Following a Chinese crackdown on imports of plastic waste, which came into effect at the beginning of 2018, exports from the G7 fell by more than 20 per cent overall. The share of the remaining exports that went to China and Hong Kong fell below 10 per cent, with other Asian countries – particularly Malaysia – making up much of the shortfall.

Visual journalism: David Blood, Liz Fauce, Aendrew Rininsland