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Great to be in Sweden again

Sweden, such a lucky country

Beautiful landscapes, forests, lakes and coastline

Exemplary welfare state, wealthy and healthy people

99% of waste diverted from landfill, over 70% recycling

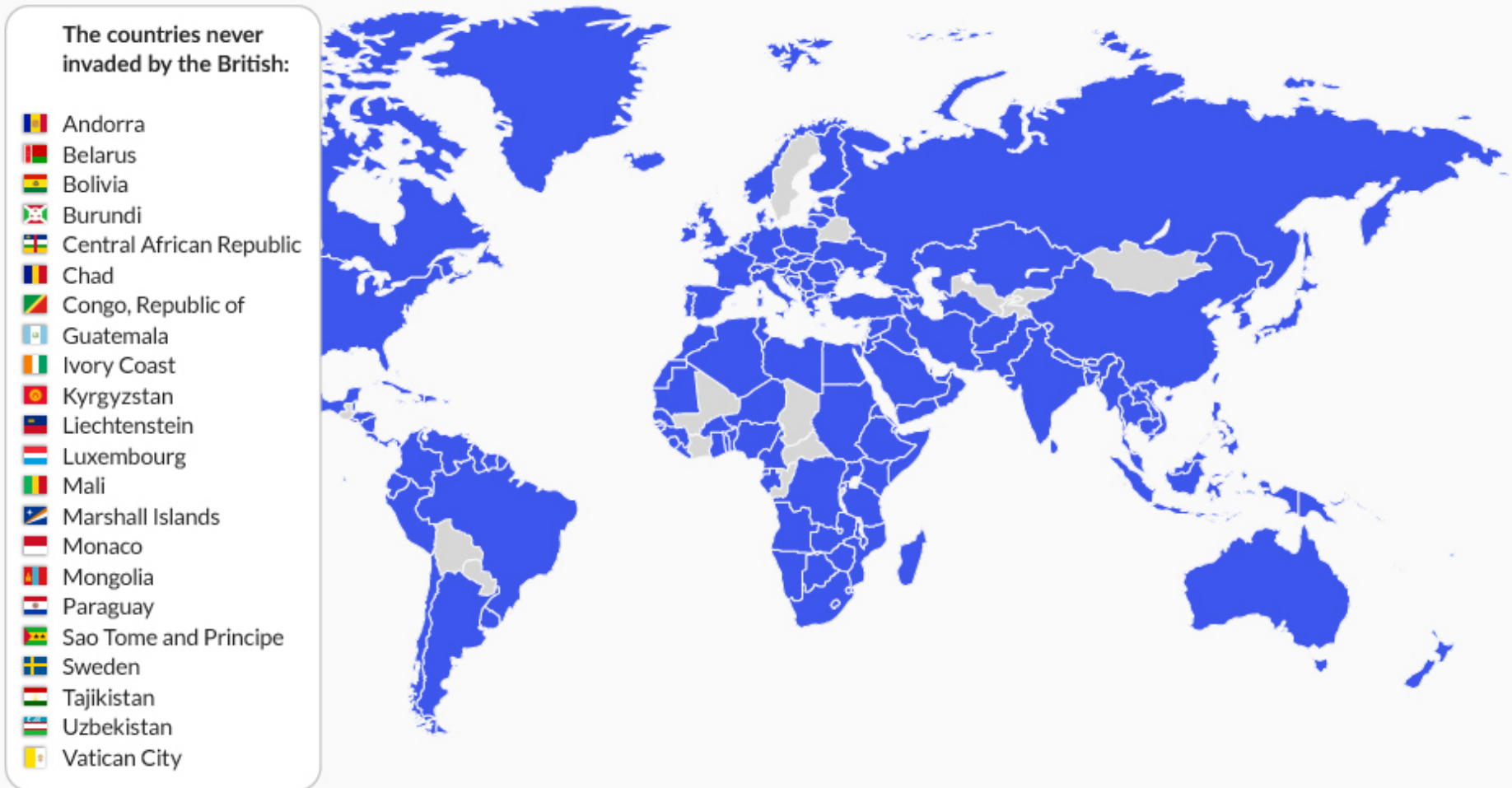
State of the art WtE facilities

And among an elite sharing an historical uniqueness with a few European countries (the others are Andorra, Bielorussia, Liechtenstein, Luxembourg and the Vatican)

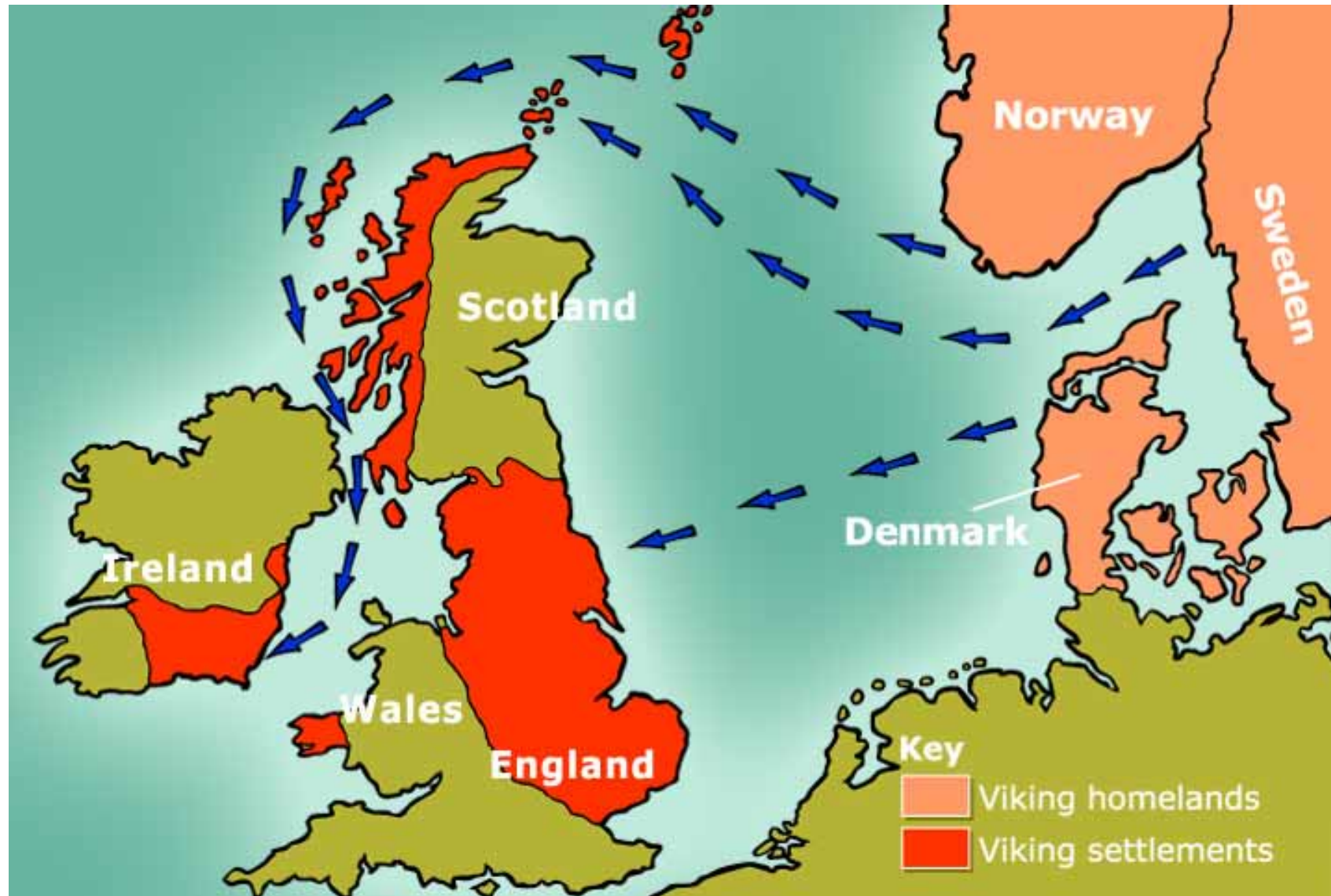
What do they have in common ?

...to never have been invaded by the British

All the countries invaded by Britain throughout history



Whereas you cannot say the same in reverse



Although historians have cast some doubts on Viking ferocity

From The Telegraph, 25 October 2008

Cambridge University has recast Vikings as "new men" with an interest in grooming, fashion and poetry.

"It seems that the Vikings may not have been as hairy and dirty as is commonly imagined," the guide says.

"A medieval chronicler, John of Wallingford, talking about the eleventh century, complained that the Vikings were too clean - they combed their hair every day, washed every Saturday, and changed their clothes regularly."

Which says a lot about the British.....

The British invasion of Sweden is in this form....



Exporting fuel, energy and money to Sweden's advantage

Let's look at some challenges we have

- Commodities
- Energy
- Demographics

And some opportunities

Competition and Opposition

But first, a quick survey among ourselves

How many are in favour of a binding climate change agreement ?

100%

How many are in favour of an ambitious Circular Economy policy from the EU ?

100%

Which would suggest everyone agrees with us, no ?

But outside this room.....

45% of the world's top 100 companies are financing movements against climate change and against environmental policies. (source: Influencemap)

These include:

BHP Billiton, BP, EDF, Glencore, Johnson Matthey, Proctor and Gamble, Rio Tinto, Statoil and Total.

Associations include

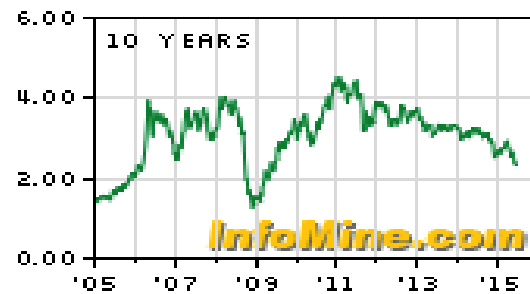
BusinessEurope, The European Chemical Industry Council (CEFIC), FuelsEurope, Eurometaux (the European Association of Metals), and the International Association of Oil and Gas Producers, MEDEF (FR).

Koch Industries, Duke Oil and Exxon Mobil in USA are leading financers of anti-climate change movements and associations

SO NEVER UNDERESTIMATE THE OPPOSITION TO WHAT SEEM TO US TO BE SENSIBLE POLICIES

METALS PRICES ARE FALLING LONG TERM

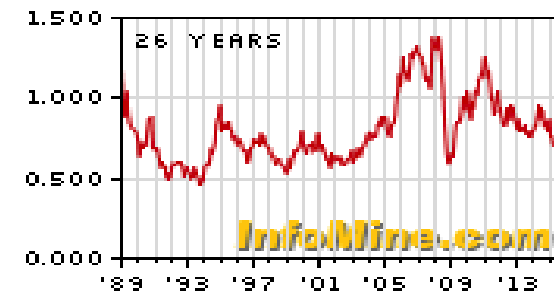
COPPER PRICE
2.30 USD/LB
20 AUG '15



IRON ORE FINES PRICE
52.15 USD/T
31 JUL '15



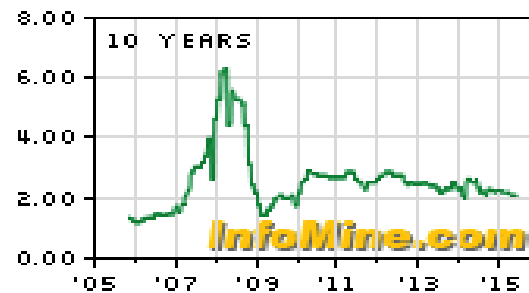
ALUMINUM PRICE
0.70 USD/LB
20 AUG '15



COBALT PRICE
13.04 USD/LB
20 AUG '15



FERRO CHROME PRICE
2.09 USD/KG
31 JUL '15



FERRO TITANIUM PRICE
4.98 USD/KG
31 JUL '15



NICKEL PRICE
4.71 USD/LB
20 AUG '15



ZINC PRICE
0.82 USD/LB
20 AUG '15



POTASH PRICE
307.00 USD/T
30 JUN '15



PHOSPHATE ROCK PRICE
115.00 USD/T
30 JUN '15



MANGANESE PRICE
1.78 USD/KG
30 JUN '15



MOLYBDENUM OXIDE PRICE
6.03 USD/LB
20 AUG '15



TANTALITE ORE PRICE
170.28 USD/KG
31 AUG '15



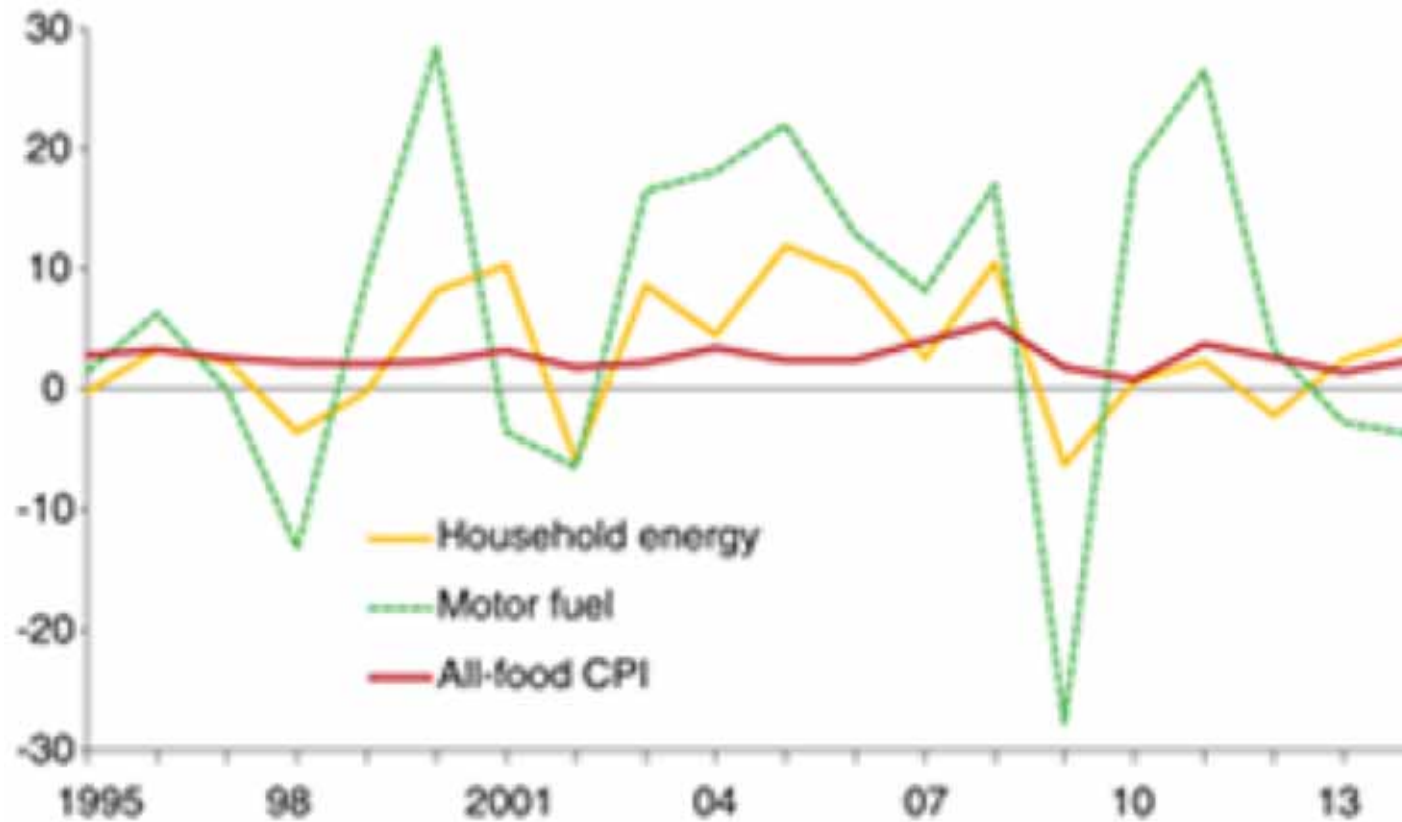
PLATINUM PRICE
1,007.00 USD/OZT
24 AUG '15



FOOD PRICES, USA

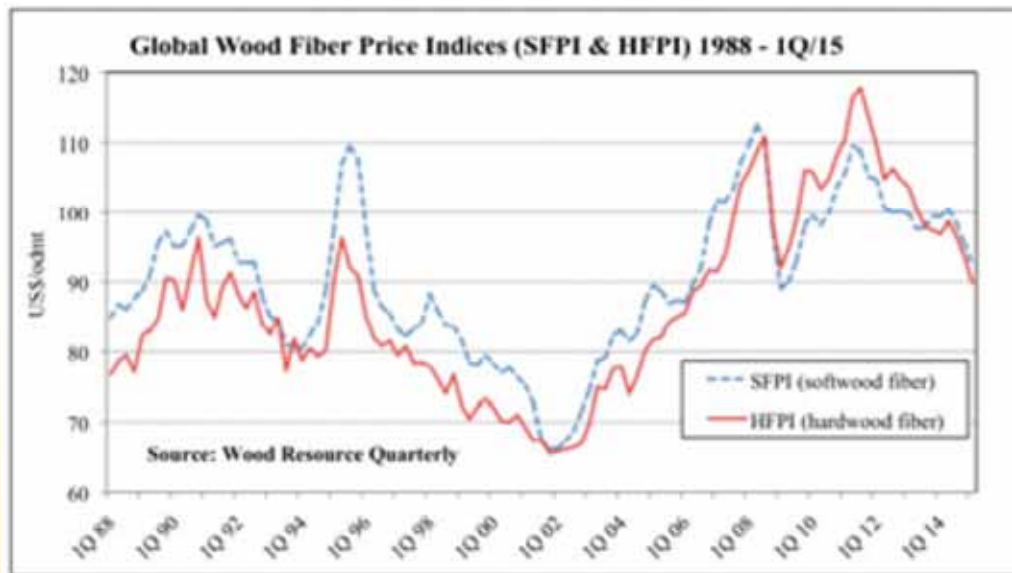
Changes in food and energy prices, 1995–2014

Annual percent change



Source: USDA, Economic Research Service using data from the U.S. Bureau of Labor Statistics.

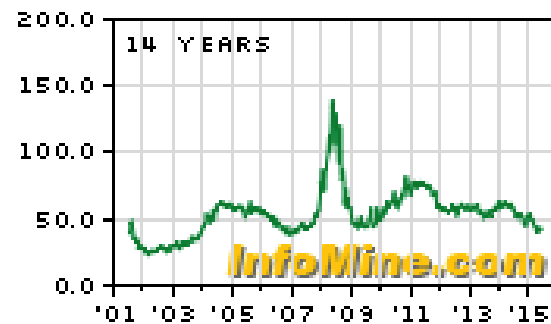
PAPER AND ENERGY PRICES FALLING



CRUDE OIL PRICE
45.93 USD/BBL
21 AUG '15



THERMAL COAL CAPP PRICE
42.88 USD/ST
18 AUG '15



NATURAL GAS PRICE
2.72 USD/MMBTU
21 AUG '15



The sharing economy (homes, cars, photos)

New businesses without infrastructure and goods

Home shopping

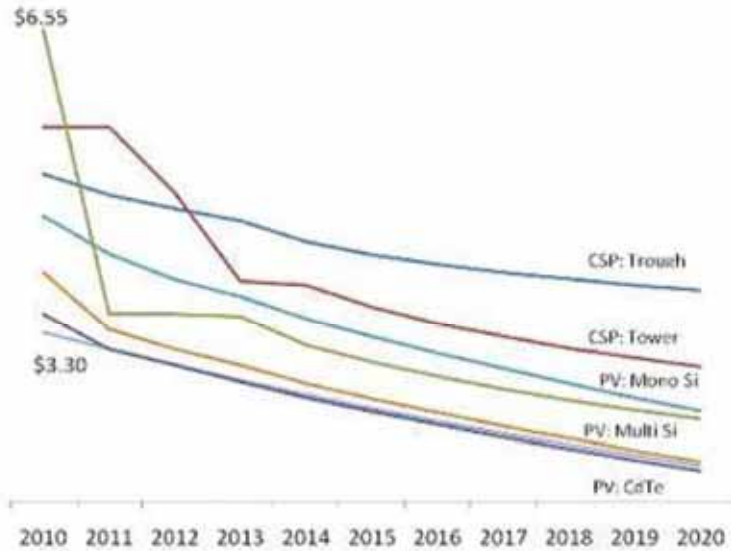
Changing mobility patterns

Closing malls

New waste streams and less waste (see printed paper)

RENEWABLES V FOSSIL FUELS

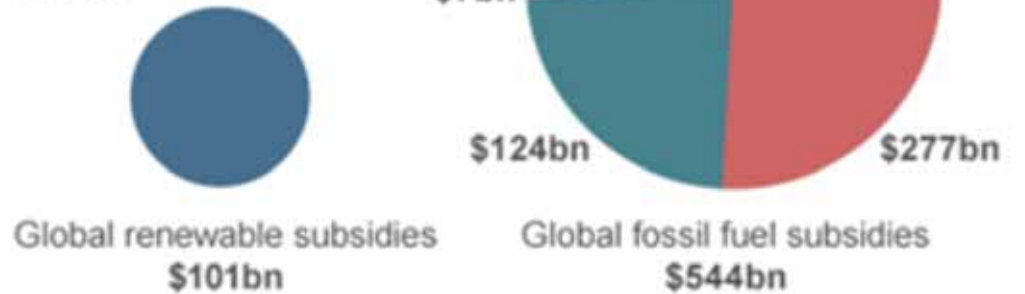
Capital Cost per Watt by Technology, 2010-2020



Source, Sierra Club

Global fuel subsidies, 2012

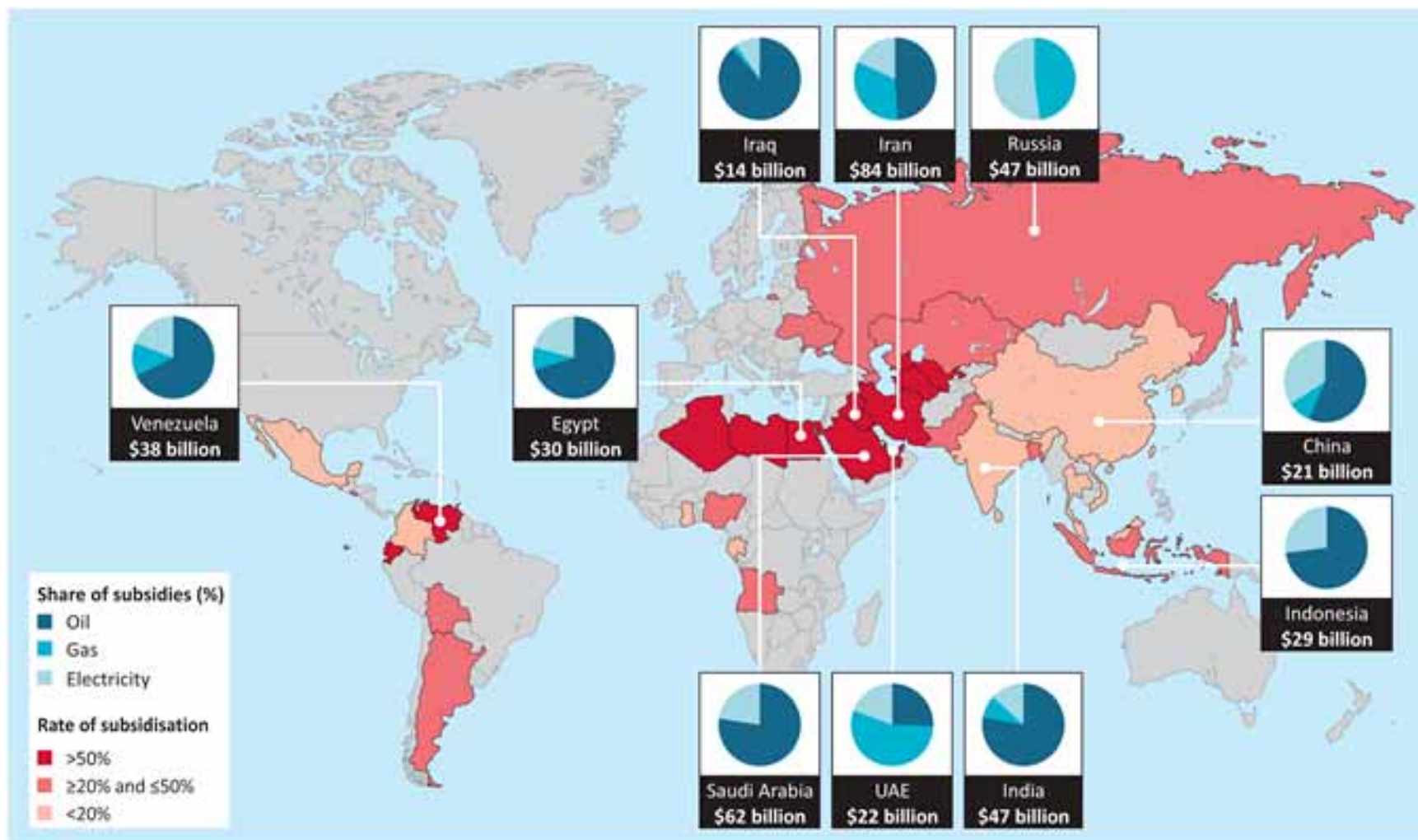
- Oil
- Electricity*
- Natural Gas
- Coal



*Fossil fuels used to generate electricity

Source:IEA

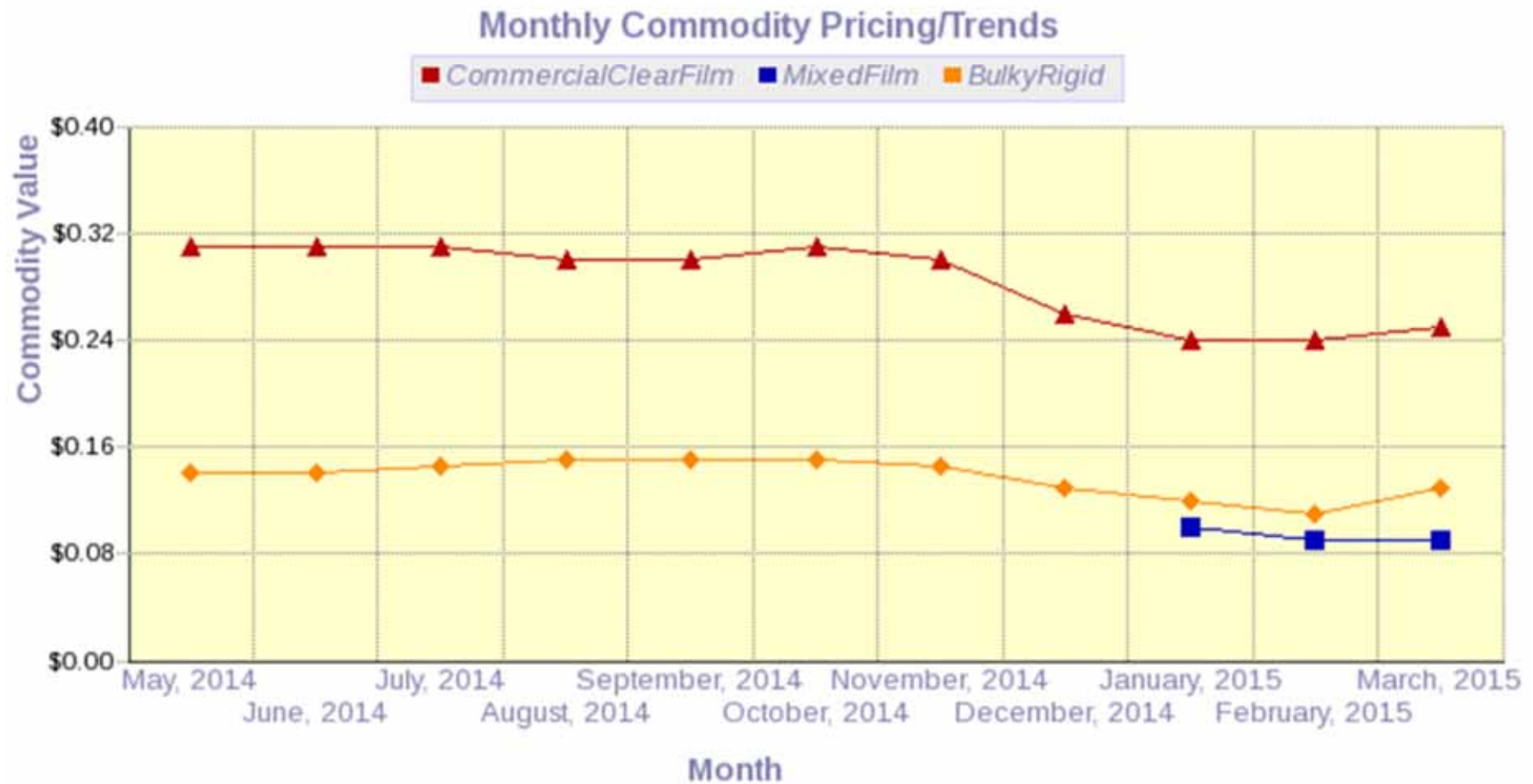
Value of fossil-fuel subsidies worldwide totalled \$548 billion in 2013



This map is without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries, and to the name of any territory, city or area.

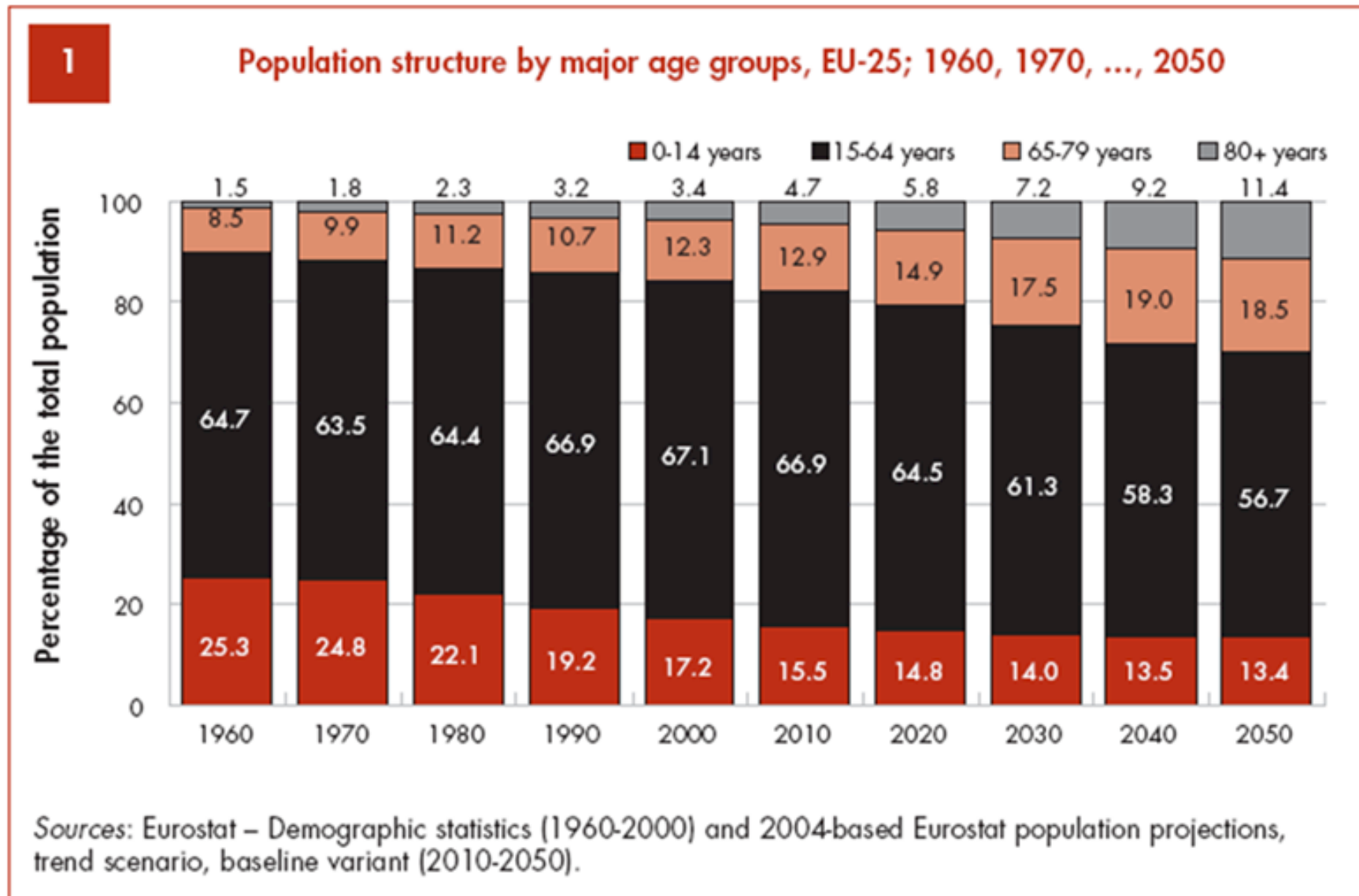
Source: IEA

Recycled plastics prices



European population is ageing quickly

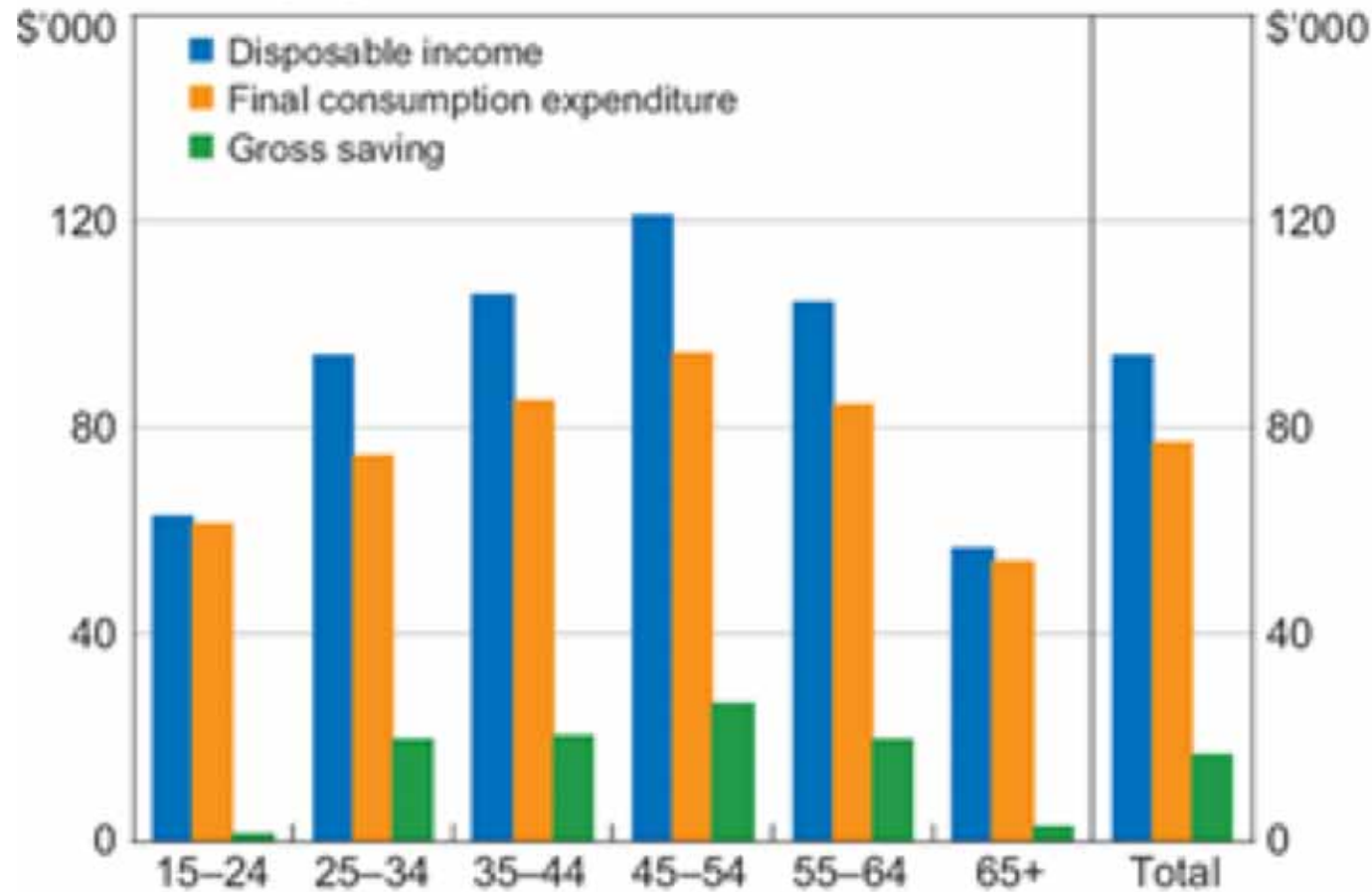
By 2050 about 30% of the EU population will be over 65 years of age (10% in 1960)



POPULATION – AGEING AND CONSUMING LESS

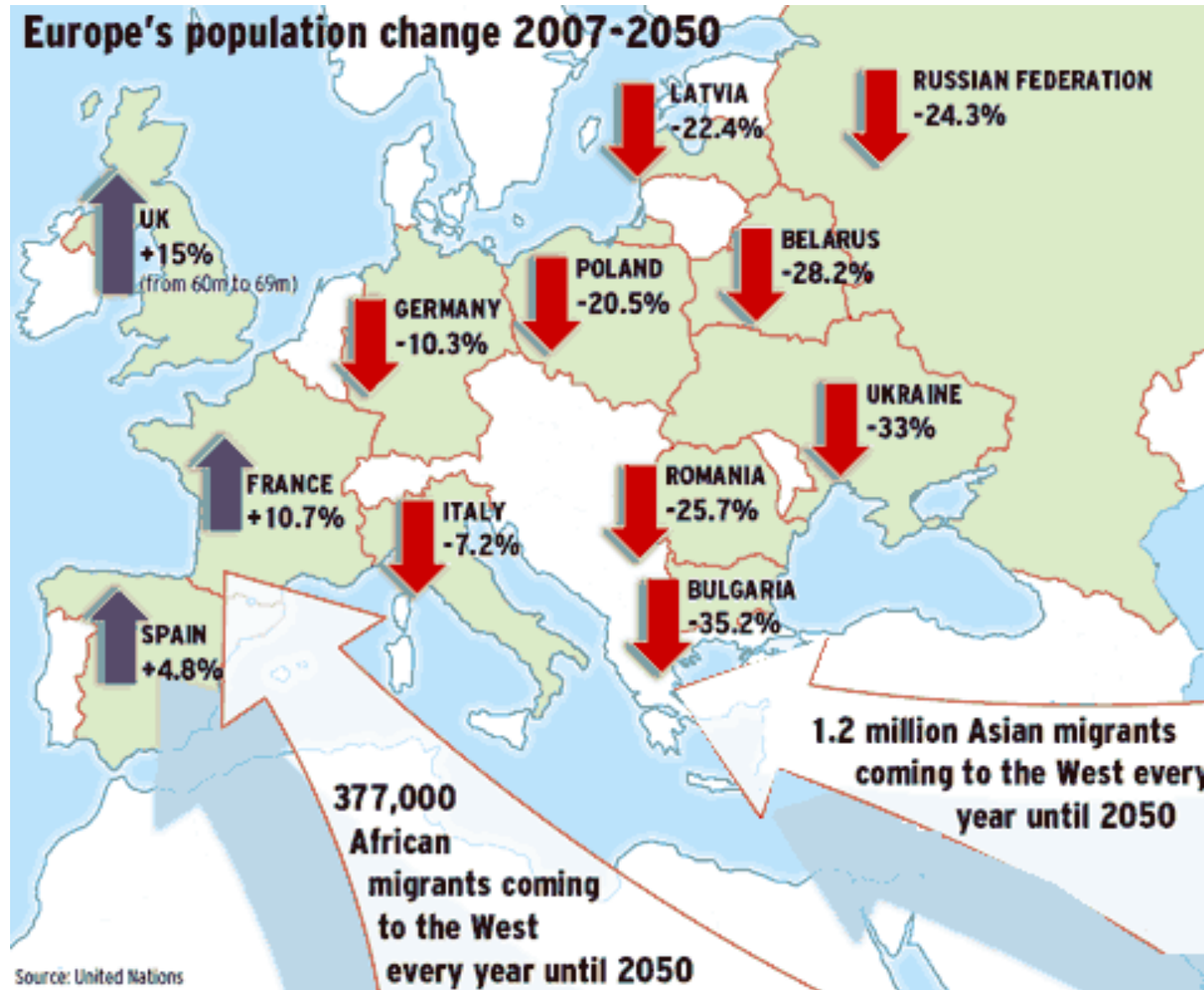
Household Income, Consumption and Saving*

By age of household reference person, 2009/10

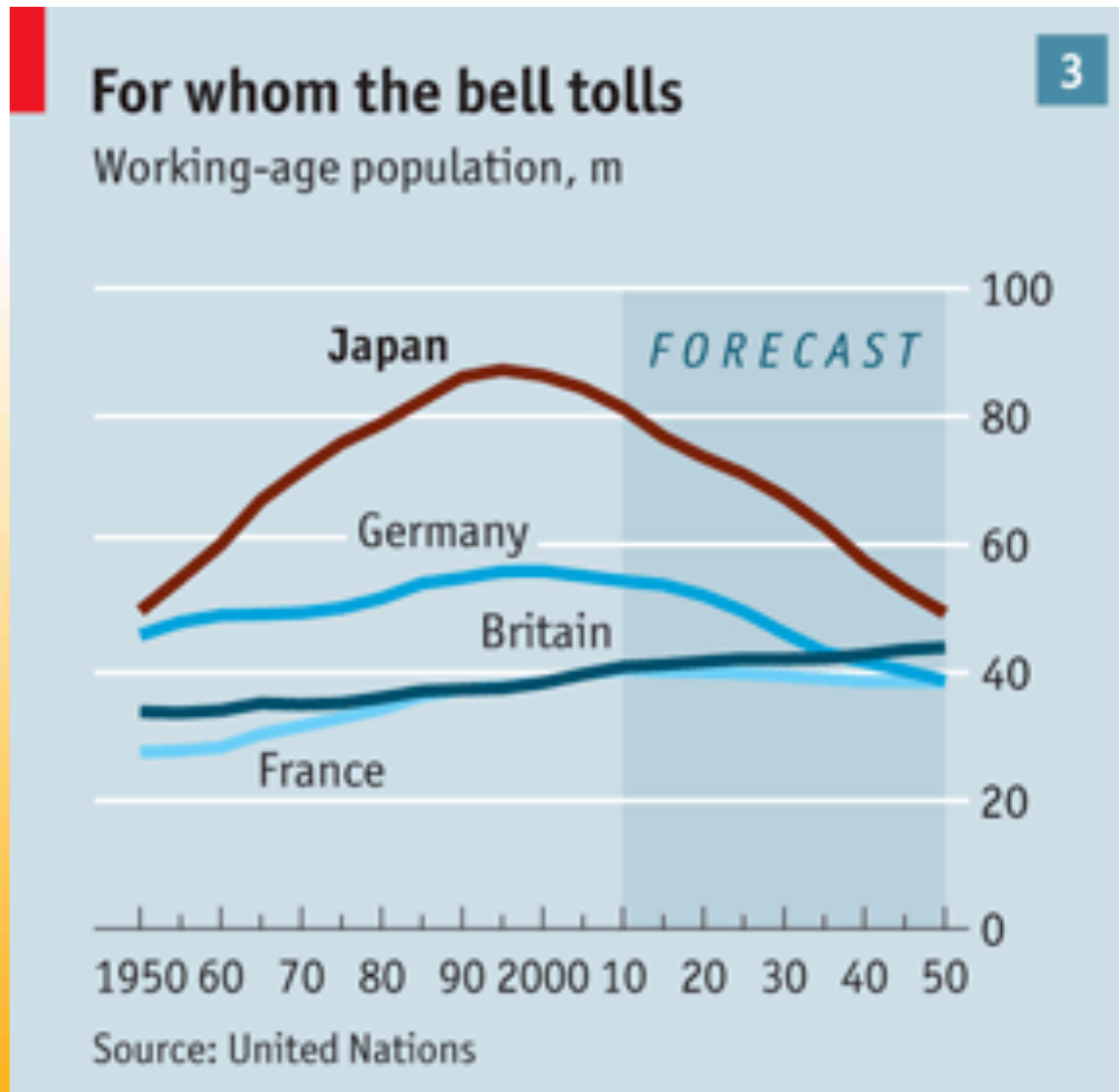


* Household average
Source: ABS

Eastern populations falling and ageing fast



Less people of working age



Ask yourself : what is going to happen to waste volumes ?

The opportunities

How do we deal with these challenges ?

1. Recycling of materials faces long term price competition

Ergo

Opportunity for WtE to recover energy from paper, plastics, textiles

2. Renewable energy subsidies and prices are in decline

Ergo

**Opportunity for large scale economies of efficiency-
medium scale is doomed**

3. Landfill closure will become mainstream EU policy

Ergo

**Opportunity for collection and treatment of organics through
AD and composting**

4. Population is declining or ageing

Ergo

Healthcare waste facilities will need to increase capacities

New models for the waste industry

- 1 factor in falling volumes
- 2 be aware of new waste streams (biomaterials)
- 3 plan for flexibility (will recycling markets recover soon ?)
- 4 stop shipping waste and enviromental damage outside of EU
- 5 encourage intra-EU trade of waste
- 6 think large-scale for WtE plants (and AD) as energy prices will not rise soon

Thank you

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