

UWTSD

12 December 2017



Llywodraeth Cymru
Welsh Government

www.cymru.gov.uk

The Welsh Government's approach to waste and the circular economy

Dr Andy Rees

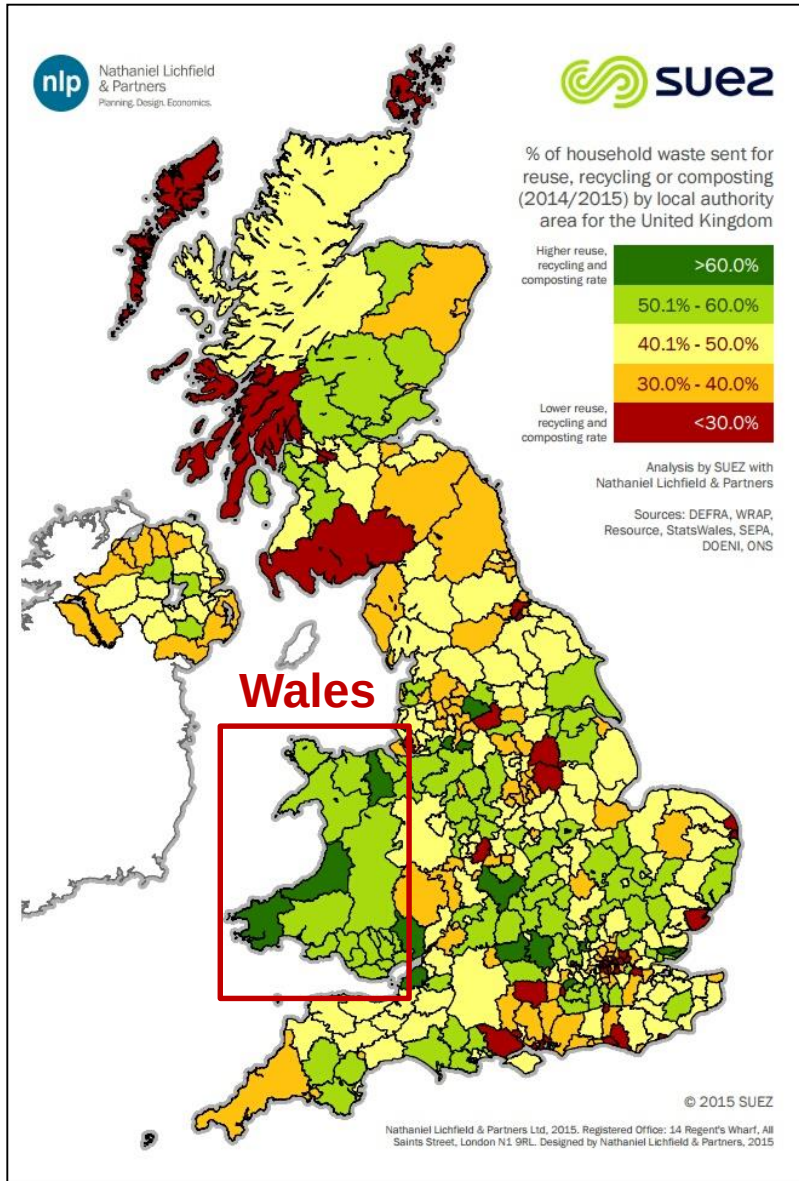
Head of Waste Strategy

Water, Waste, Resource Efficiency and Flood Division,

Department for Environment

Welsh Government

Wales in context



Wales:

- ~3 million people
- 22 Local Authorities (single tier), with responsibility for the collection and management of household and some commercial waste
- Own Parliament and Government since 1999
- Responsibilities include waste policy and delivery (including producing an Article 28 WFD compliant waste plan)
- Powers to develop waste Acts and Regulations
- Ability to set environmental taxes
- Responsible for Landfill Disposals Tax for Wales from 2018

Why do we need to tackle resource consumption and waste?

Financial



Social



Environmental



Resource constraints



“The story of an English can of cola”



Where we used to be



Where we are now



Why do we need to tackle waste – what's at stake?

Economic threats

- Waste is a cost to business
- Raw material prices are rising
- There is only one planet's worth of resources, yet we use three's worth
- Resource security / critical materials
- Run-away climate change?
- Pressure on local authority budgets
- Reducing value of contaminated co-mingled recyclate

£

£

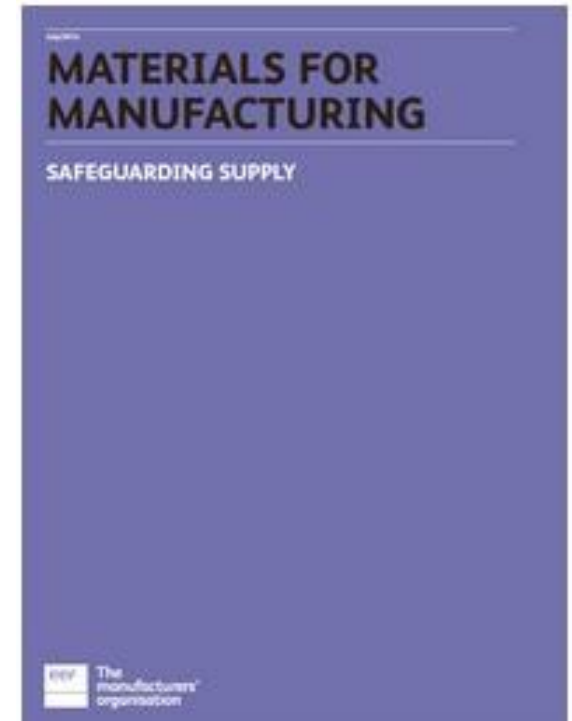
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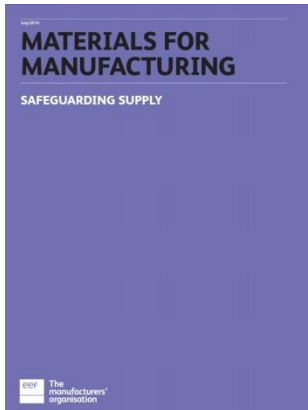
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The Manufacturers' Organisation (EEF) 'Materials for Manufacturing: safeguarding supply'

- Around 40% of manufacturers' operational costs are material costs
- 75% of EU manufacturers have seen material costs increase since 2000.
- Average resource prices have doubled since 2000
- China is the leading producer of 22 elements of strategic economic value
- At risk: the EU has deemed 20 materials to have supply risks, all of which play a key role in manufacturing.
- **'Competitor countries are responding to the risk – the UK is in danger of being left behind'**

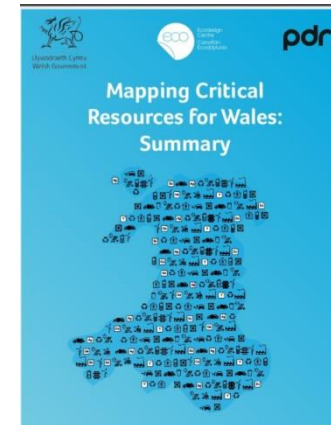


Raw material supply risks



How we obtain, use and reuse the materials that flow and circulate within the economy matters to manufacturing. Materials and resources are the lifeblood of the sector and account for around 40% of manufacturers' costs¹.

Highly volatile costs, supply risks associated with a small but growing number of commodities and the UK's high dependency on imports have heightened concern within the manufacturing community in recent years. UK manufacturers have consistently highlighted that high material prices and security of supply is a threat to growth². Rising commodity prices increase manufacturers' input costs, in turn reducing discretionary spending by households. But volatility is equally as damaging as it can dampen economic growth by increasing uncertainty which may discourage or delay businesses investment and increase the cost of hedging against resource related risk³.



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Mapping Critical Resources for Wales

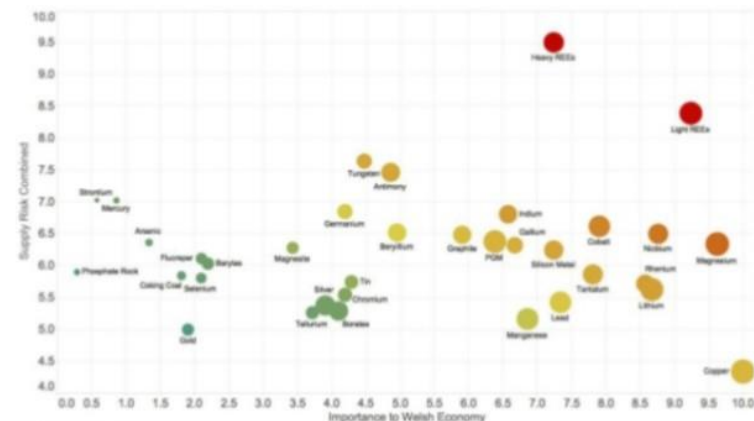
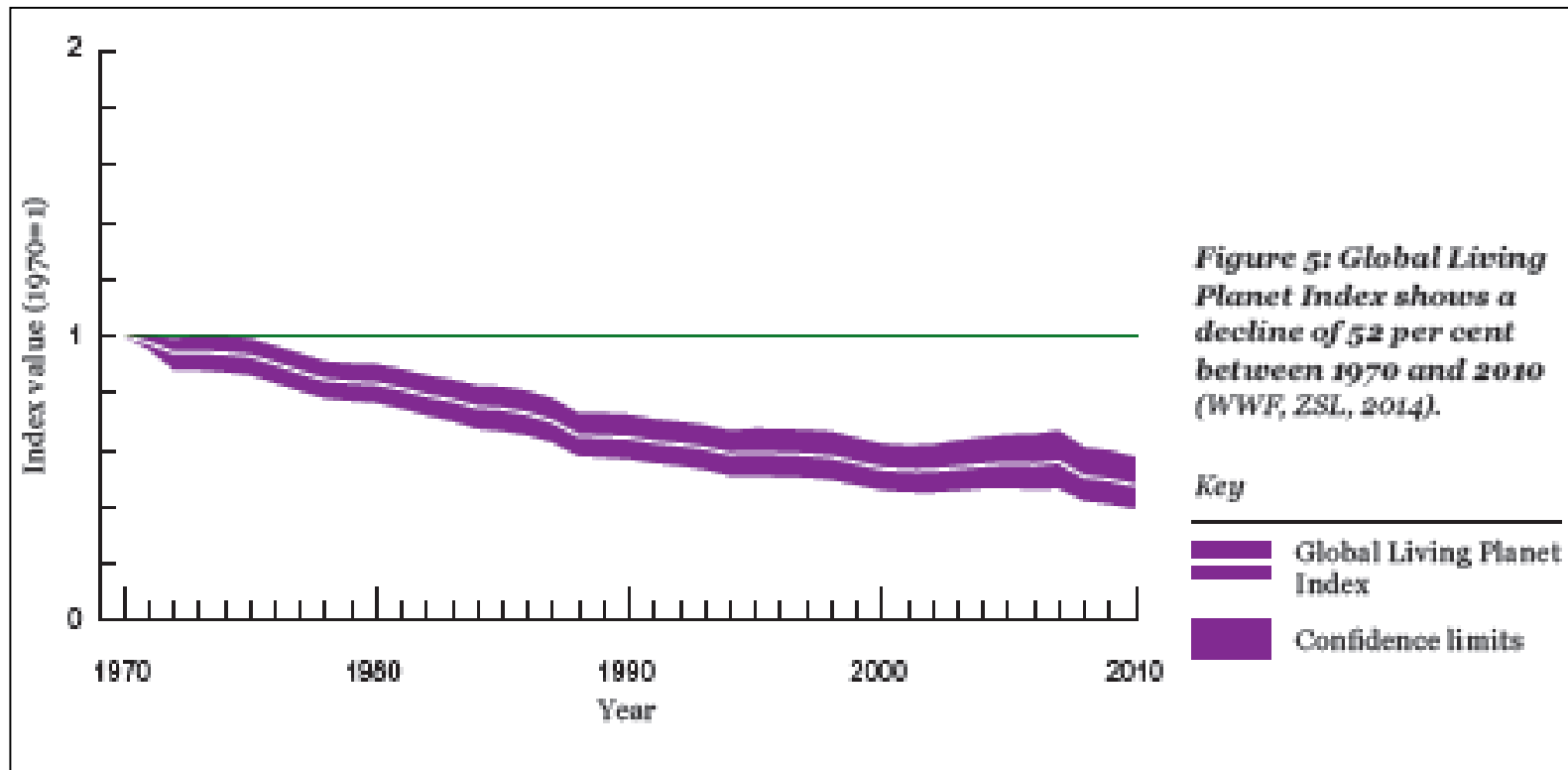


Figure 5.1. Criticality matrix for Welsh Economy based on the approach outlined in section 3. Resources scoring both highly for importance to the Welsh Economy and supply risk are most critical. The colour denotes the criticality from red being most critical to green being least. The size dimension for each resource indicates environmental impact, with larger dots indicating greater environmental impact.

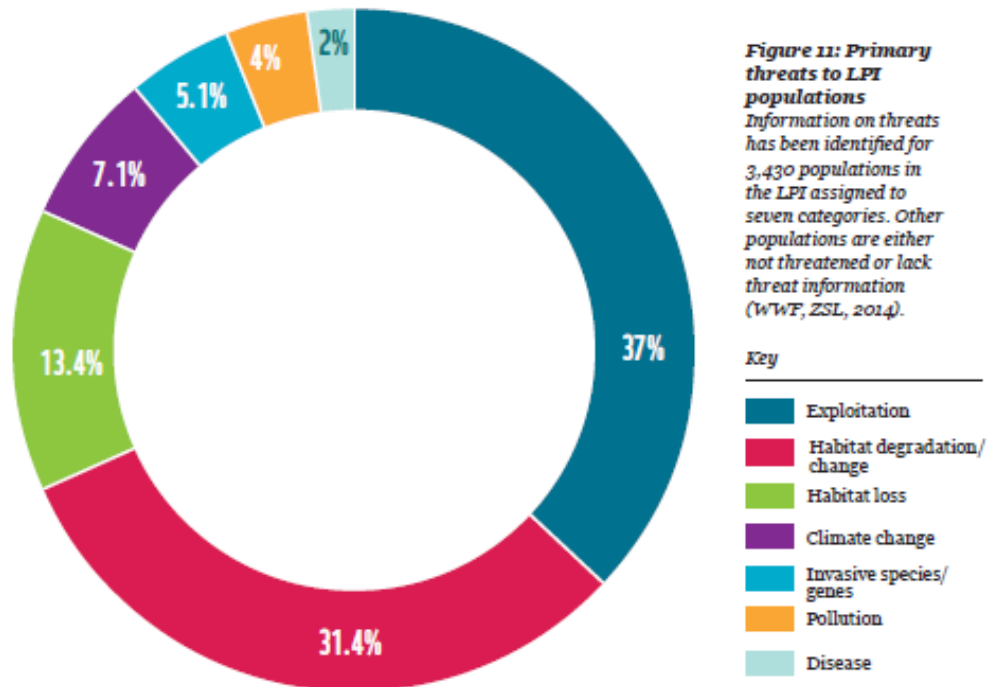
Pressures –

‘Catastrophic’ decline in animal numbers across the globe



Pressures – ‘Catastrophic’ decline in animal numbers across the globe

Threats to species



Pressures –

‘State of Nature 2016: Wales’

Figure 4

The percentage of species in each trend category across the UK over the long term and the short term. The line in the ‘little change’ category shows the division between declining species on the left, and increasing species on the right. The values in brackets show the number of species assessed.

- Over the long term, 56% of species declined and 44% increased. Among these, 40% showed strong or moderate declines, 31% showed little change, and 29% showed strong or moderate increases.
- Over the short term, 53% of species declined and 47% increased. Among these, 41% showed strong or moderate declines, 25% showed little change, and 34% showed strong or moderate increases.

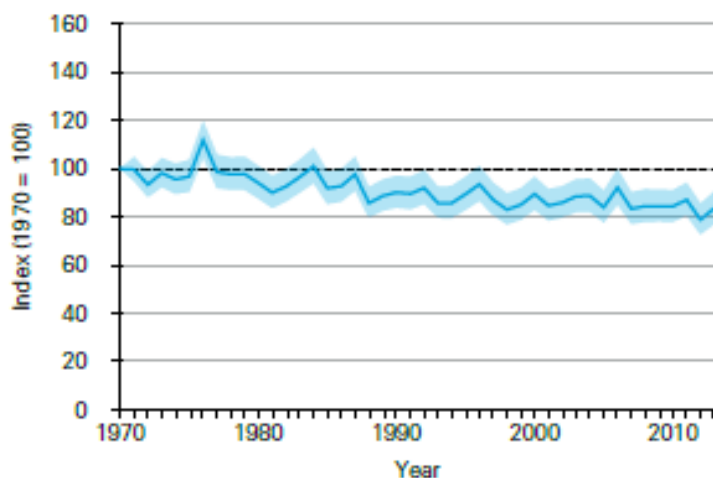


Figure 5

The Abundance and Occupancy Index shows the change in the status of 2,501 terrestrial and freshwater species, based on abundance data (899 species) and occupancy data (1,602 species).

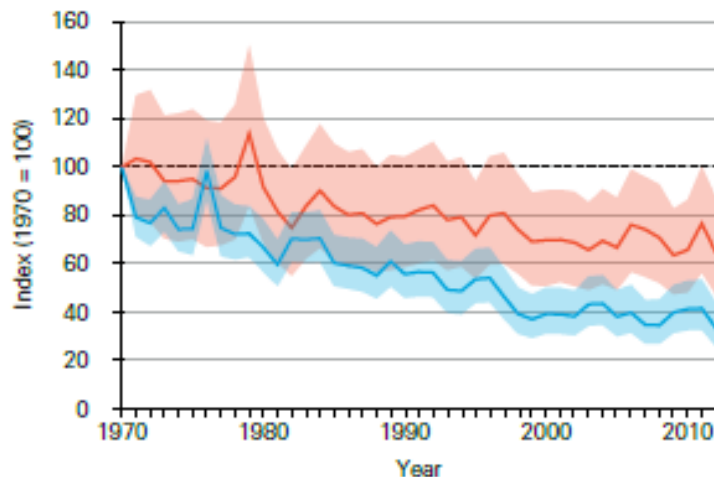


Figure 6

The UK Priority Species Indicator shows the Abundance Index (blue) for 213 priority species, and the Occupancy Index (red) for 111 priority species⁷. The shaded areas show 95% confidence intervals.

Pressures and threats – 'State of Nature 2016: Wales'



The continued loss of habitats and declines of species are a result of persistent and in some cases intensifying pressures. A number of global pressures outlined by the third UN Global Biodiversity Outlook¹⁴ are important in Wales:

- *Habitat loss and degradation, such as the loss of blanket bog;*
- *Fragmentation and isolation of habitats for many reasons, such as inappropriate development;*
- *Human population increases;*
- *Climate change;*
- *Excessive nutrient input and other forms of pollution;*
- *Over-exploitation and unsustainable use, including agricultural pressures;*
- *Invasive alien species, for example rhododendron in Snowdonia.*

Pressures – Unsustainable ecological footprints

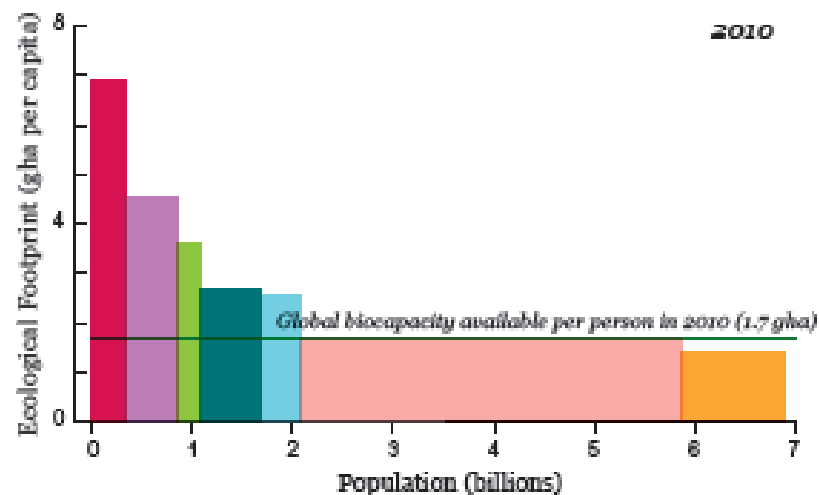
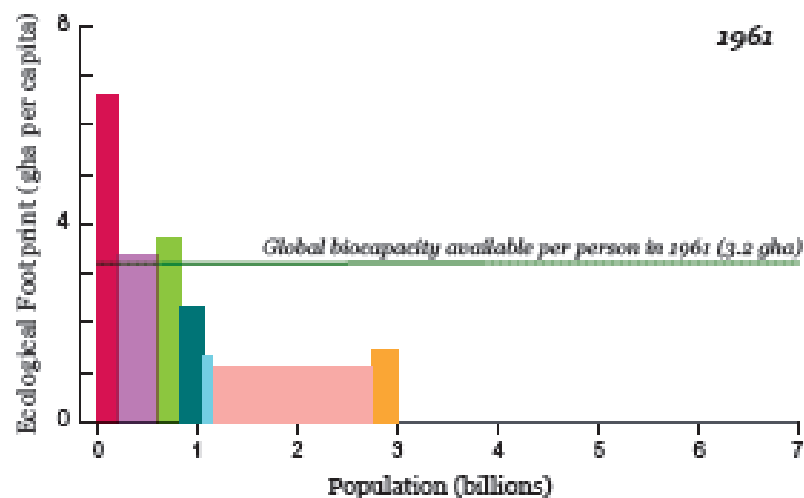


Figure 22: Change in the average Ecological Footprint per capita and in population for each geographic region in 1961 and 2010
The area of each bar represents the total Footprint for each region (Global Footprint Network, 2014).

Key

- North America
- EU
- Other Europe
- Latin America
- Middle East/Central Asia
- Asia-Pacific
- Africa



‘We’d never kill an albatross or gorilla: but we let others do it on our behalf’

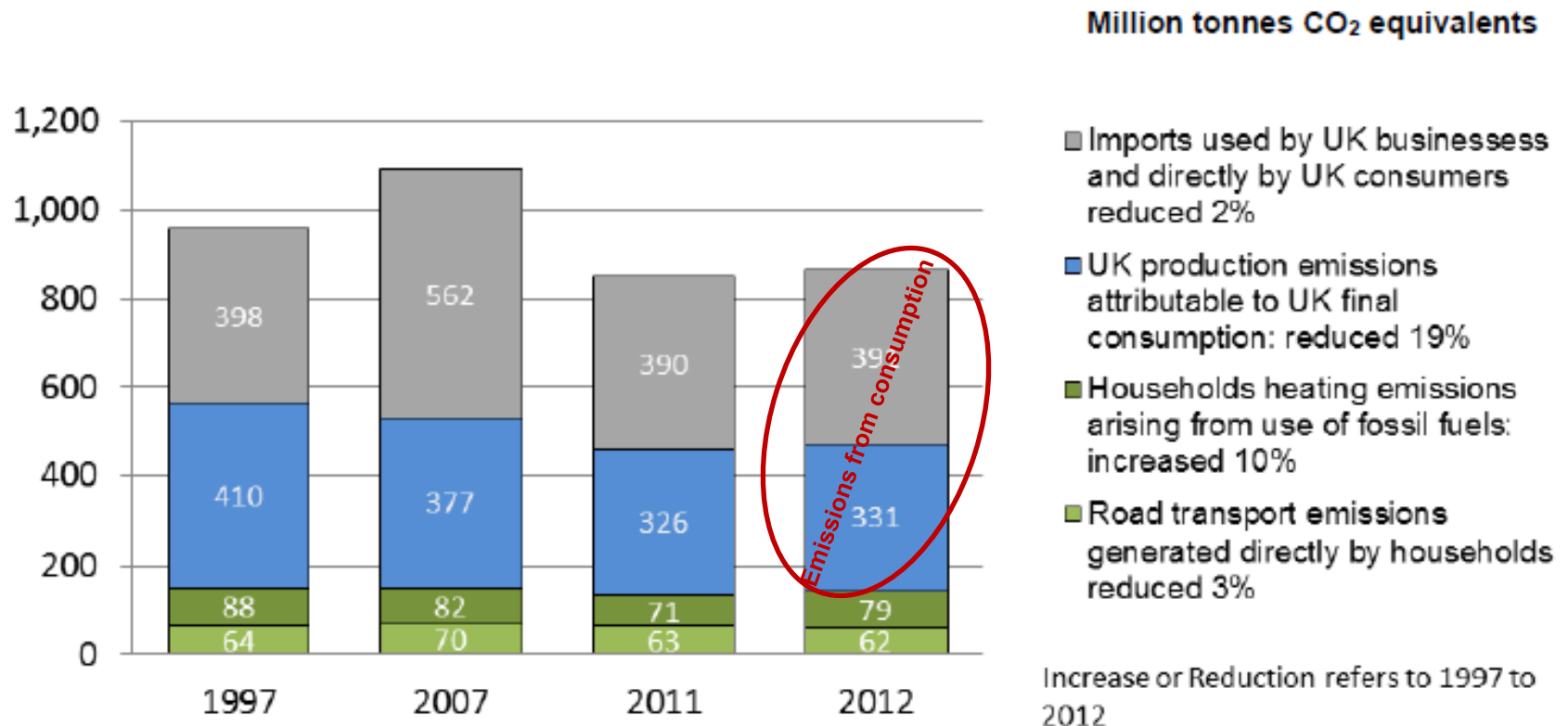
George Monbiot, The Guardian, 14 September 2016



*‘These should be among the central issues of our age. Yet we treat these losses as sad but peripheral, though we commission them through the things we buy. Elephants, rhinos, lions, polar bears, the great sharks, turtles, condors, whales, rainforests, wetlands, coral reefs: **they are all the by-catch of consumerism. We assert both the right to consume – whatever we want, however we want – and the right to forget the consequences.***’

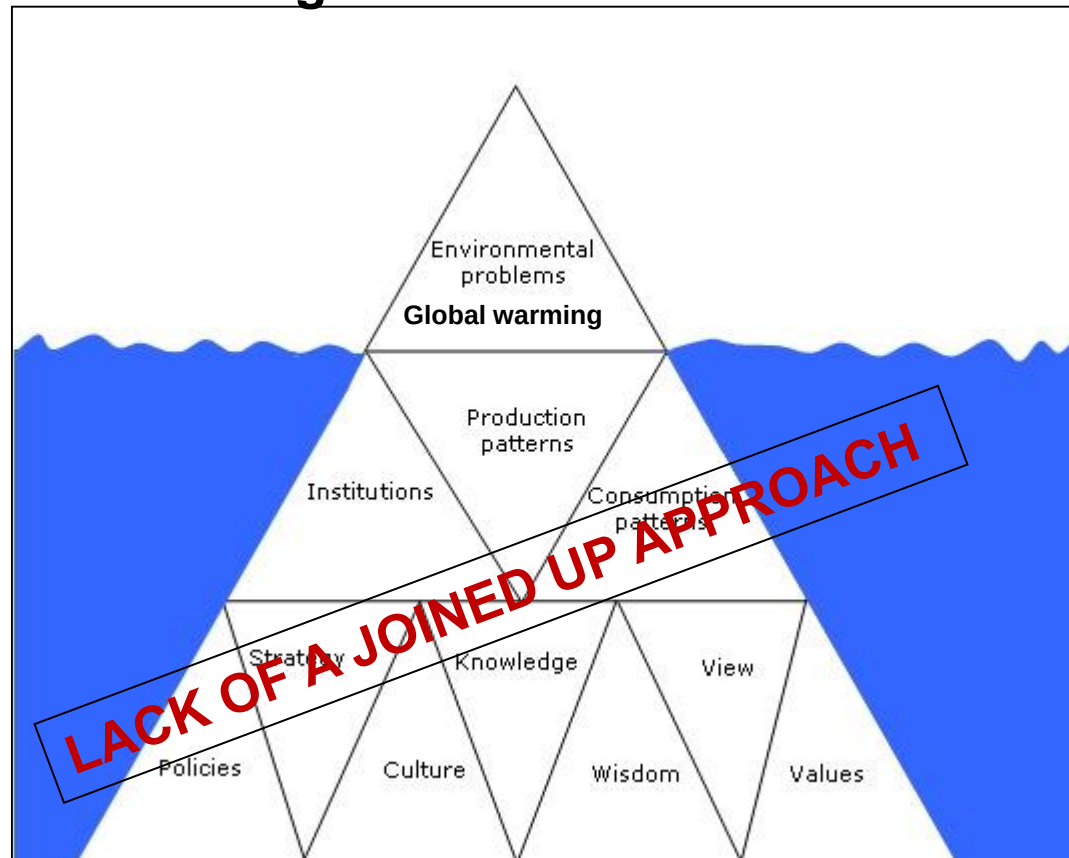
Pressures: Climate Change: The impact of our consumption on CO₂ emissions

Figure 2 Greenhouse gas emissions associated with UK consumption 1997, 2007, 2011 and 2012



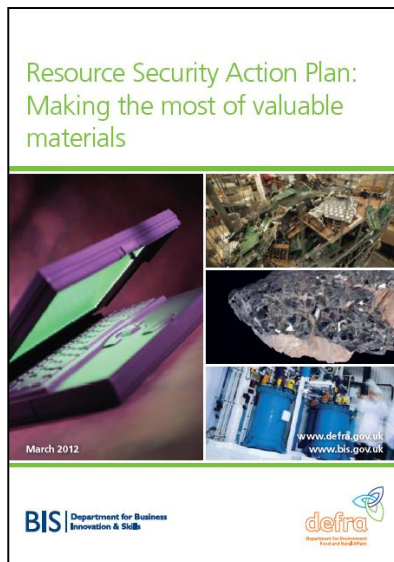
Pressures: The root causes of the problems – **systematic institutional failure & not pulling together**

The 'Iceberg' model



Source: Conserving Biodiversity Through Sustainable Production and Consumption: Background document for the pre-conference organised by ECO Forum 9 October 2007, Belgrade

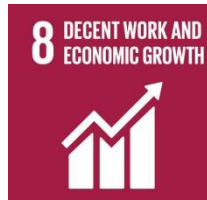
A framework for us to address consumption, resource efficiency and waste

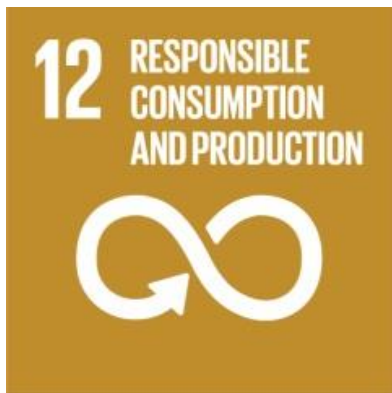


- World:
 - UN Sustainable Development goals
- Europe:
 - EU Waste Framework Directive
 - 1975
 - 2008
 - New 2016 proposals
 - EU Roadmap for a Resource Efficient Europe
 - EU Circular Economy Package 2016
 - EU 7th Environmental Action Programme
 - EU Study on Critical Raw Materials
- UK (England):
 - Waste Strategy for England
 - Sustainable Consumption and Production Action Plan
 - Resource Security Action Plan (2012)
 - Clean Growth Plan (2017)
 - Industrial Strategy (2017)



SUSTAINABLE DEVELOPMENT GOALS





Targets include:

12.1 Implement the 10-year framework of programmes on sustainable consumption and production, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries.

12.3 By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses.

12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature.

EU Waste Framework Directive 2008



- Scope:
- Lays down “measures to protect the environment and human health by... (*inter alia*) reducing overall impacts of resource use and improving the efficiency of such use”.
- Key statutory requirements:
 - waste hierarchy
 - reuse network
 - high quality recycling and separate collections of waste
 - encourage the separate collection of biowaste
 - an integrated and adequate network of waste disposal and recovery installations
 - produce a waste management plan and a waste prevention programme
 - evaluate the plans every sixth year
 - recycling targets (eg. 50% recycling of household waste by 2020)



EU Circular Economy Package – proposed legislative changes



- Key elements of the revised waste proposal include (as a revision of the EU Waste Framework Directive) include:
 - A common EU **target for recycling 65% of municipal waste** by 2030;
 - A binding landfill target to **reduce landfill to maximum of 10%** of all waste by 2030;
 - Promotion of economic instruments to discourage landfilling ;
 - Concrete measures to **promote re-use and stimulate industrial symbiosis** –turning one industry's by-product into another industry's raw material;
 - Economic incentives for producers to put **greener products on the market** and support recovery and recycling schemes (e.g. for packaging, batteries, electric and electronic equipment, vehicles) through **Extended Producer Responsibility**



EU Circular Economy Package – 2 December 2016



- Key proposals include:
 - **Actions to reduce food waste** including a common measurement methodology, improved date marking, and tools to meet the global Sustainable Development Goal to **halve food waste by 2030**;
 - Measures in the **Ecodesign working plan for 2015-2017** to promote reparability, durability and recyclability of products, in addition to energy efficiency;
 - A **revised Regulation on fertilisers**, to facilitate the recognition of organic and waste-based fertilisers in the single market and support the role of bio-nutrients;
 - A **strategy on plastics in the circular economy**, addressing issues of recyclability, biodegradability, the presence of hazardous substances in plastics, and the Sustainable Development Goals **target for significantly reducing marine litter**.

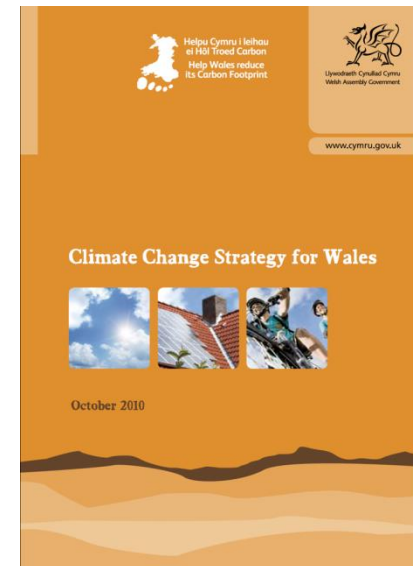
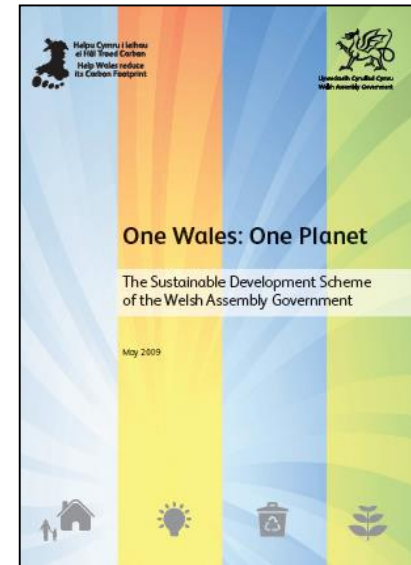
Le dépôt dans les
conteneurs de tri
est autorisé de
8H00 à 20H00
Le Mercredi

papiers
cartons

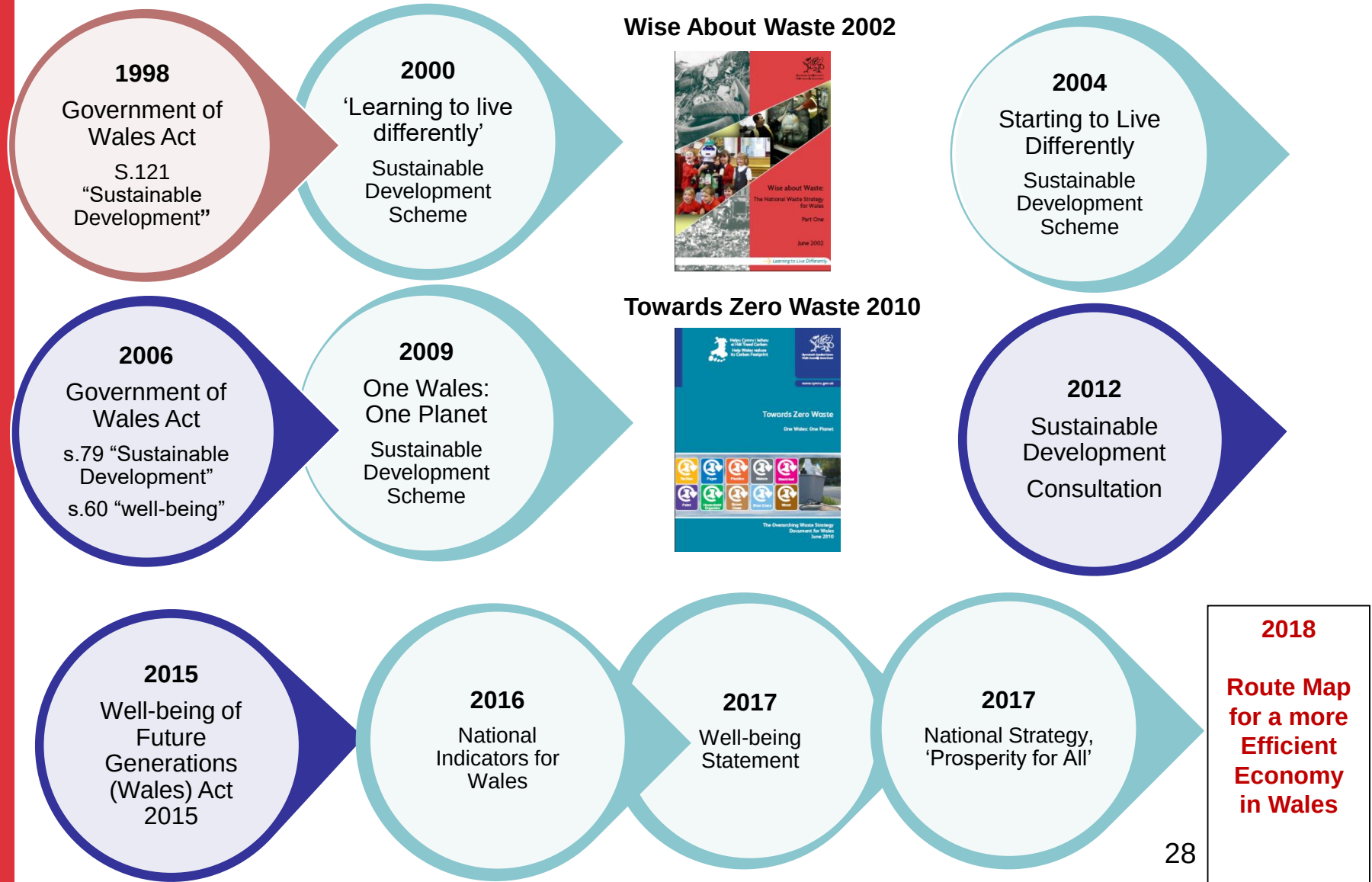
bouteilles
plastiques

A history of ambition from the Welsh Government

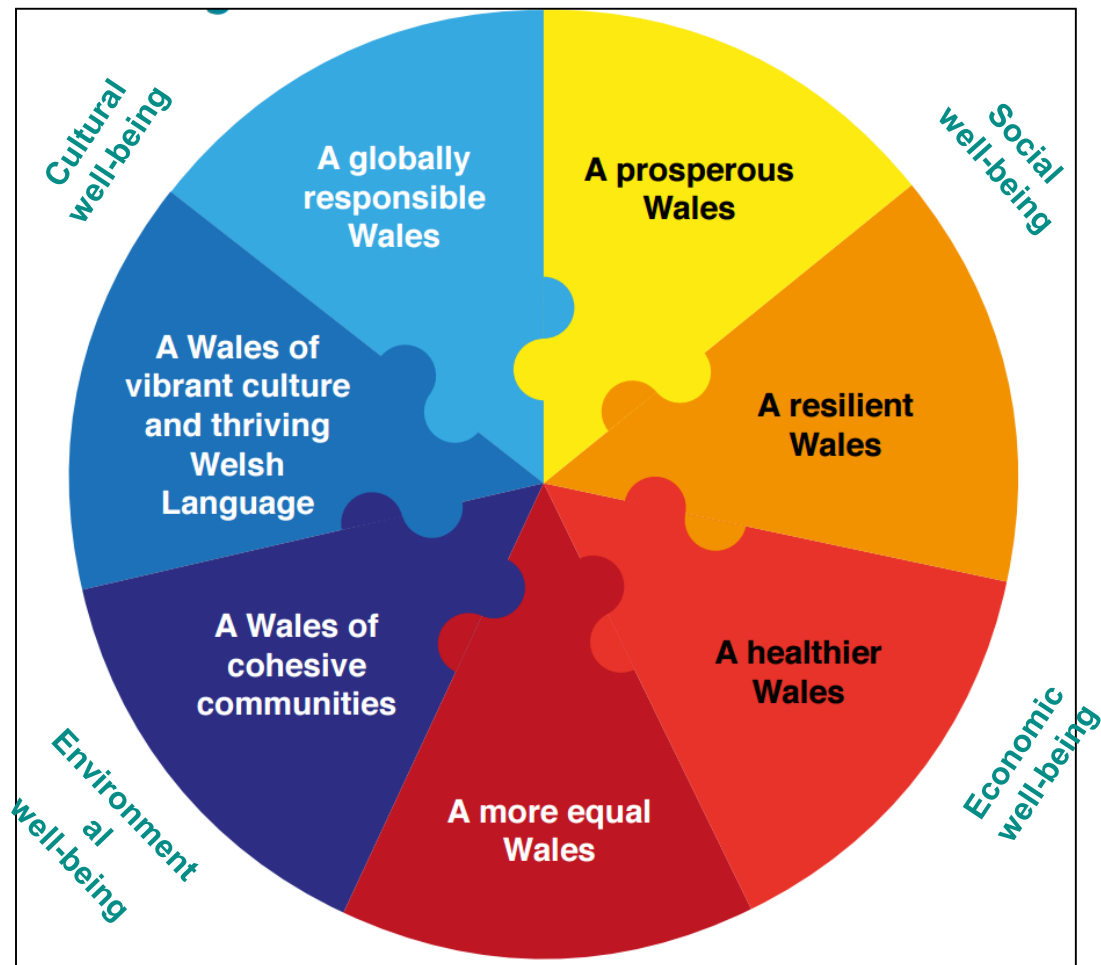
- Sustainable Development (“One Wales, One Planet”) 2009
- Climate Change Strategy 2010
- Towards Zero Waste 2010
- Well-being of Future Generations (Wales) Act 2015
- Environment (Wales) Act 2016



The sustainable development journey and the development of the Wales waste strategies



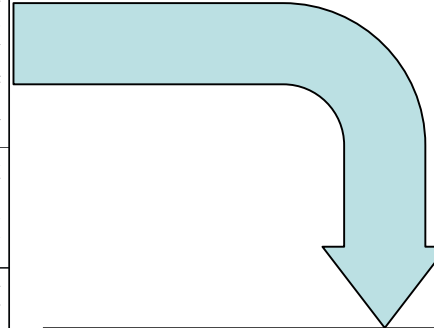
Wales: Well-being of Future Generations Act and goals



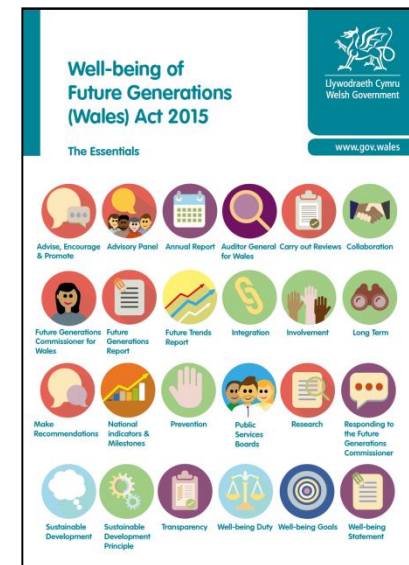
Well-being of Future Generations (Wales) Act 2015

4. The well-being goals

Goal	Description of the goal
A prosperous Wales.	An innovative, productive and low carbon society which recognises the limits of the global environment and therefore uses resources efficiently and proportionately (including acting on climate change); and which develops a skilled and well-educated population in an economy which generates wealth and provides employment opportunities, allowing people to take advantage of the wealth generated through securing decent work.
A resilient Wales.	A nation which maintains and enhances a biodiverse natural environment with healthy functioning ecosystems that support social, economic and ecological resilience and the capacity to adapt to change (for example climate change).
A healthier Wales.	A society in which people's physical and mental well-being is maximised and in which choices and behaviours that benefit future health are understood.
A more equal Wales.	A society that enables people to fulfil their potential no matter what their background or circumstances (including their socio economic background and circumstances).
A Wales of cohesive communities.	Attractive, viable, safe and well-connected communities.
A Wales of vibrant culture and thriving Welsh language.	A society that promotes and protects culture, heritage and the Welsh language, and which encourages people to participate in the arts, and sports and recreation.
A globally responsible Wales.	A nation which, when doing anything to improve the economic, social, environmental and cultural well-being of Wales, takes account of whether doing such a thing may make a positive contribution to global well-being.



A prosperous Wales. An innovative, productive and low carbon society which recognises the limits of the global environment and therefore uses resources efficiently and proportionately (including acting on climate change); and which develops a skilled and well-educated population in an economy which generates wealth and provides employment opportunities, allowing people to take advantage of the wealth generated through securing decent work.





Environment (Wales) Act 2016

Structure and content of the Environment Act

The key parts of the act are:

- Part 1: Sustainable management of natural resources – enables Wales' resources to be managed in a more proactive, sustainable and joined-up way. It also helps to tackle the challenges we face and is focused on the opportunities our resources provide.
- Part 2: Climate change – provides the Welsh Ministers with powers to put in place statutory emission reduction targets, including at least an 80% reduction in emissions by 2050 and carbon budgeting to support their delivery. This is vital within the context of our existing UK and EU obligations and sets a clear pathway for decarbonisation. It also provides certainty and clarity for business and investment.
- Part 3: Charges for carrier bags – extends the Welsh Ministers' powers so that they may set a charge for other types of carrier bags such as bags for life. It also places a duty on retailers to donate the net proceeds from the sale of carrier bags to good causes.

Structure and content of the act

- Part 4: **Collection and disposal of waste** – improves waste management processes by helping us achieve higher levels of business waste recycling, better food waste treatment and increased energy recovery. This will help to decrease pressure on natural resources while also contributing towards positive results for both the economy and the environment.

Our Article 28 plan Wales waste strategy -Towards Zero Waste: key milestones

2025: Towards Zero Waste

Significant waste reduction
(**27%** reduction)

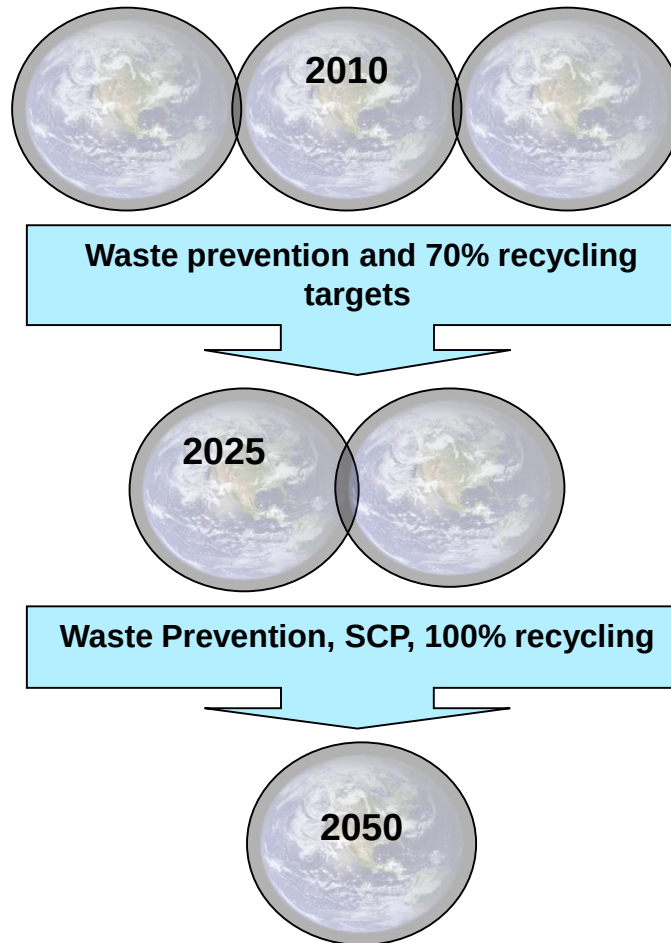
Recycling rate of at least
70%

AD food waste priority

‘Closed loop recycling’
systems (**quality, kerbside
sort** approach) in Wales

Residual waste to high
efficiency EfW

As close to **zero** landfill as
possible



2050: Achieving Zero Waste

Reduce our share of
Wales' ecological footprint
to 'one Wales: one planet'
levels by 2050 (**65%**
reduction of waste)

Produce no residual waste
through SCP - any waste
that is produced is re-
used/ recycled (at **100%**).

The current imperatives for Wales / Welsh Government

- Waste is fully devolved – our future is on our hands (we have our own Wales waste strategy)
- Statutory sustainable development duty under the Well-Being of Future Generations (Wales) Act 2015
- Natural Resources Policy 2017
- Environment (Wales) Act 2016 – Part 2 – 80% reduction in greenhouse gas emissions by 2050
- **‘Prosperity for All: the national strategy’** (for Wales) 2017 – *“We will: set out a route map for a more resource efficient economy, building on our success in recycling and reducing the environmental impacts of production and consumption.”*
- **Economic Action Plan** – to be published 12 December!



Env Act 2016 - Part 1 - Managing our natural resources in a sustainable way

Sustainable management of natural resources is about managing these resources in a joined up way that delivers real outcomes for the environment, people, the economy and our communities.

Our aim is to make the most of the opportunities that Wales' natural resources present while safeguarding and building the resilience of natural systems to continue to provide these benefits over the long term.



National Resources Policy for Wales

- Statutory under Environment (Wales) Act – Part 1
- Published in August 2017

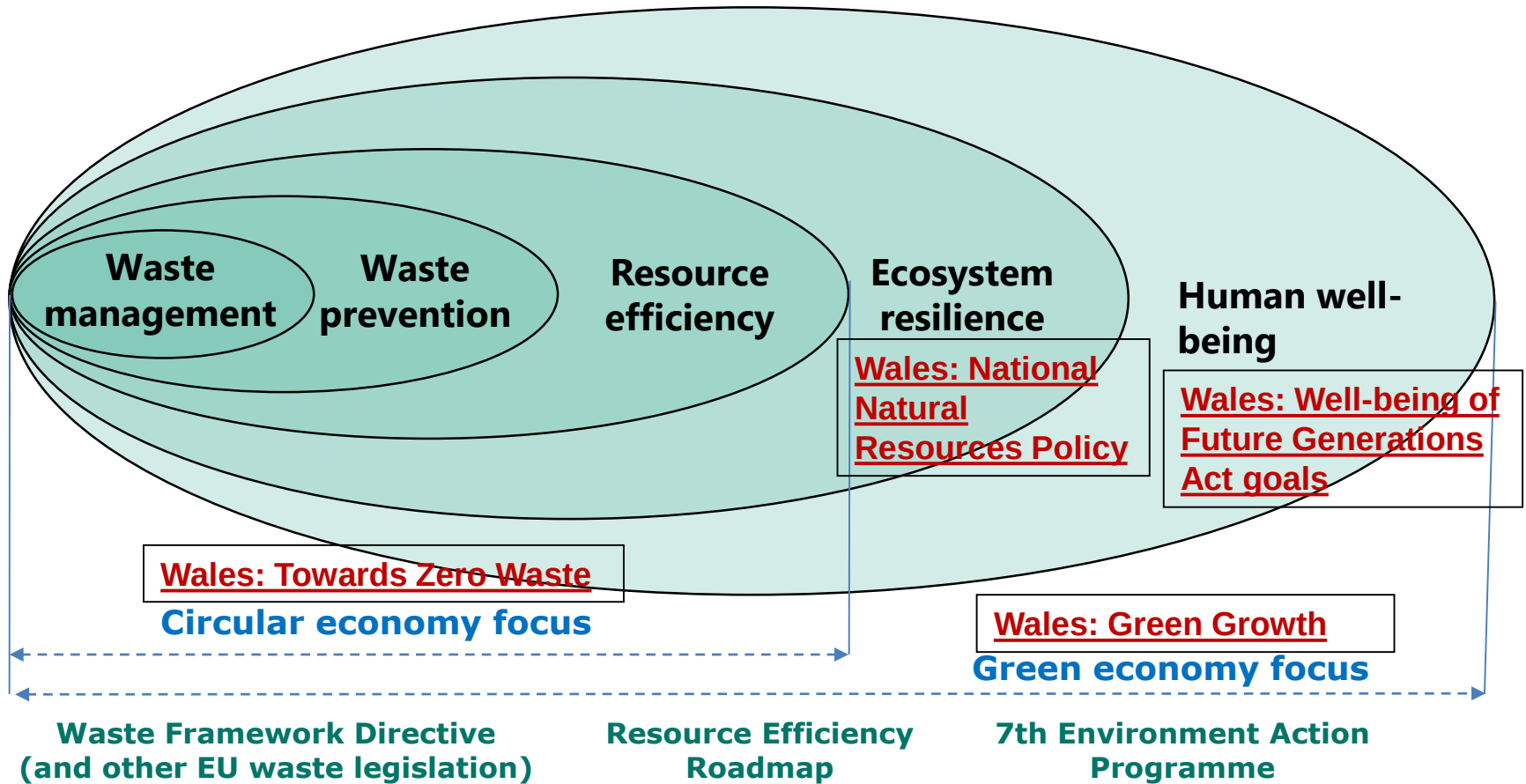


The opportunities Wales' natural resources provide

Sets out four headline opportunities associated with our natural resources, namely:

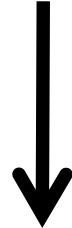
- Supporting successful, sustainable communities;
- Promoting green growth and innovation to create sustainable jobs;
- **Supporting a more resource efficient economy**; and,
- Maintaining healthy, active and connected communities. 37

Circular economy in context – the EU and Wales policy approach

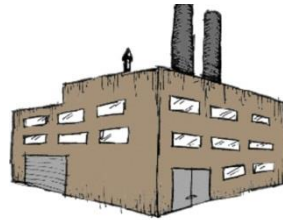


The traditional 'linear economy' approach

Take



Make



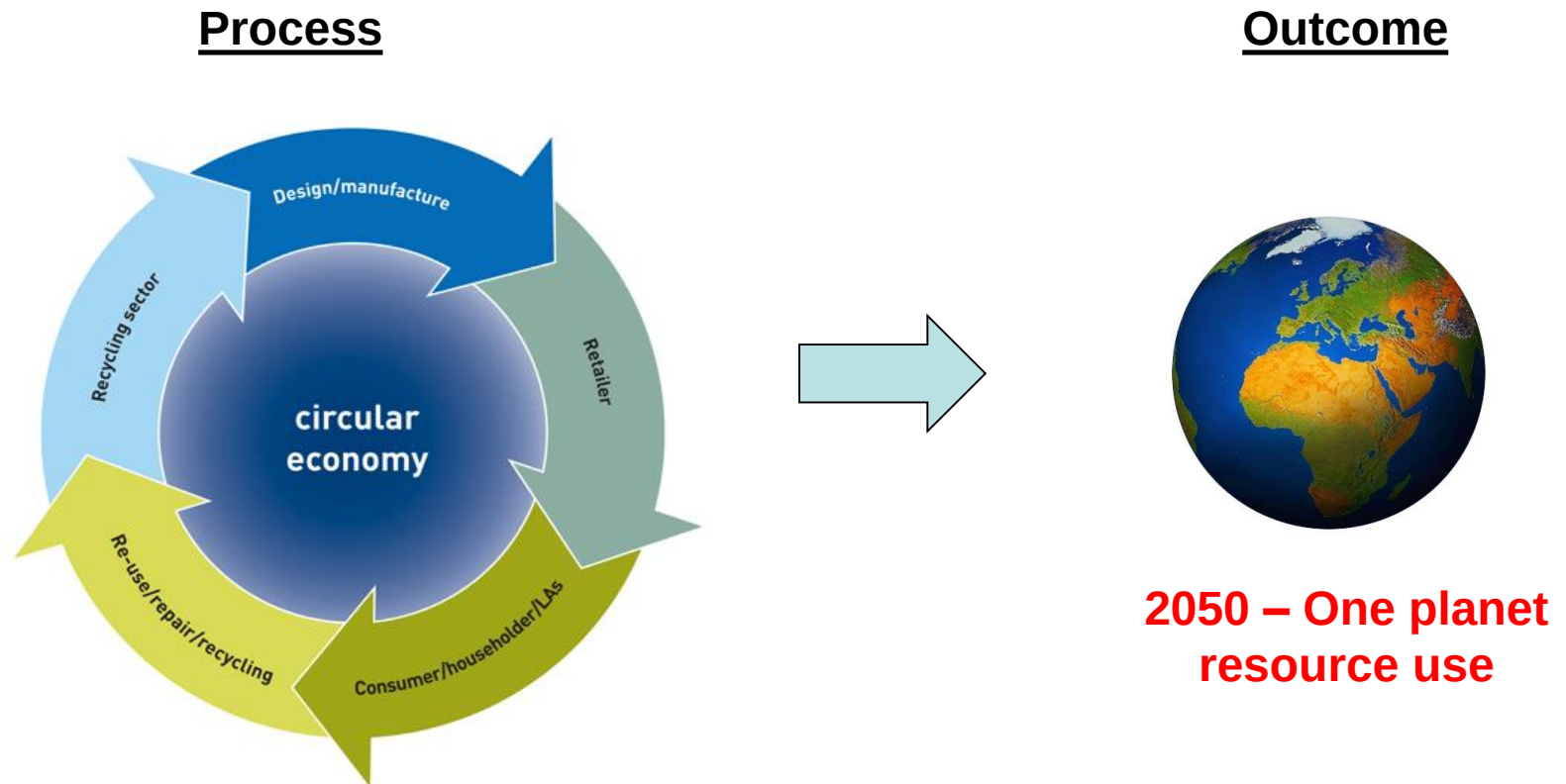
Use



Lose

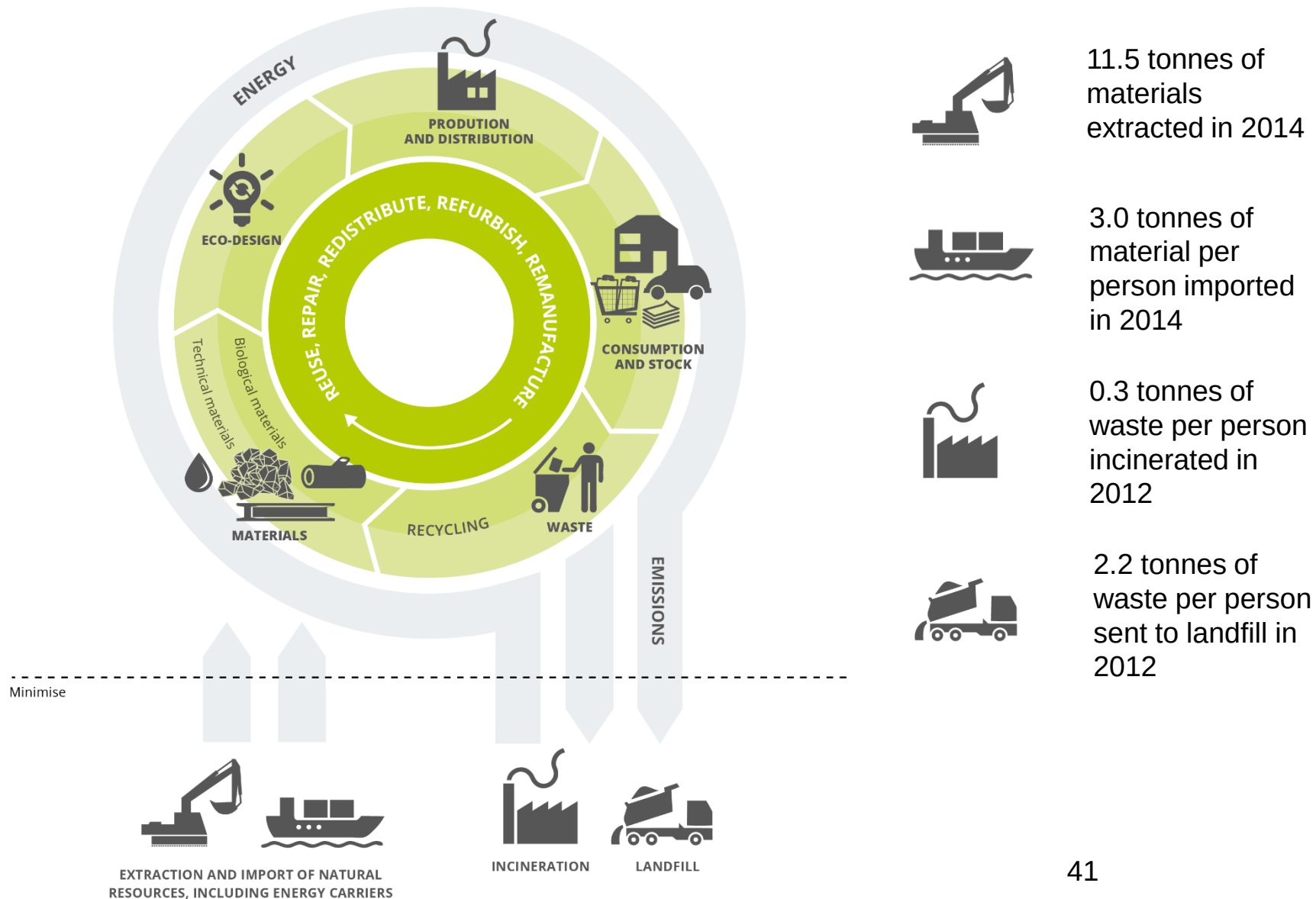


The strategic response that's needed – **A concerted, joined up effort, to work towards a circular economy**

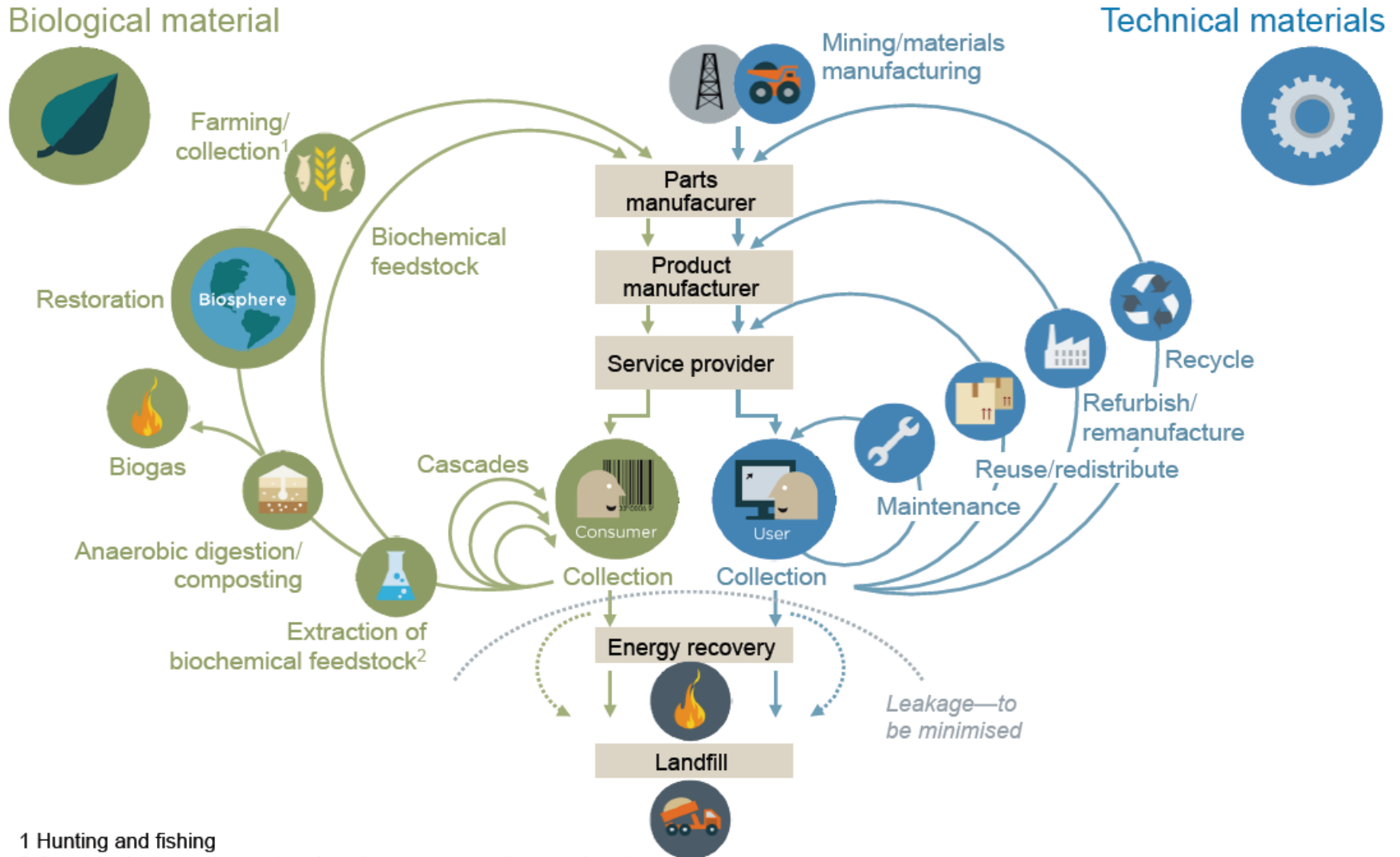


With integrated effort from global - to global region – to country – to region – to local council – to people and businesses

What is the circular economy?



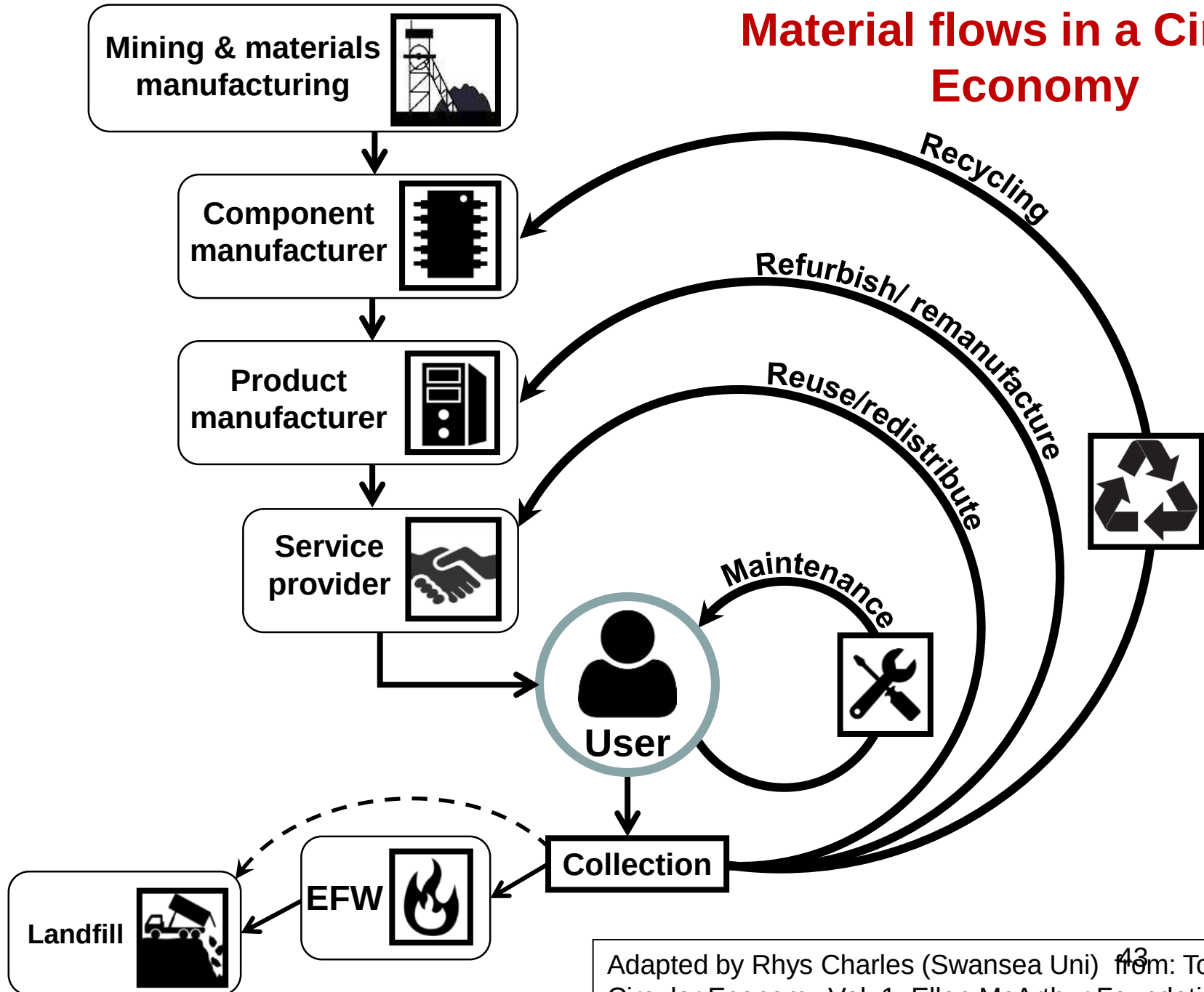
The 'butterfly diagram'



1 Hunting and fishing

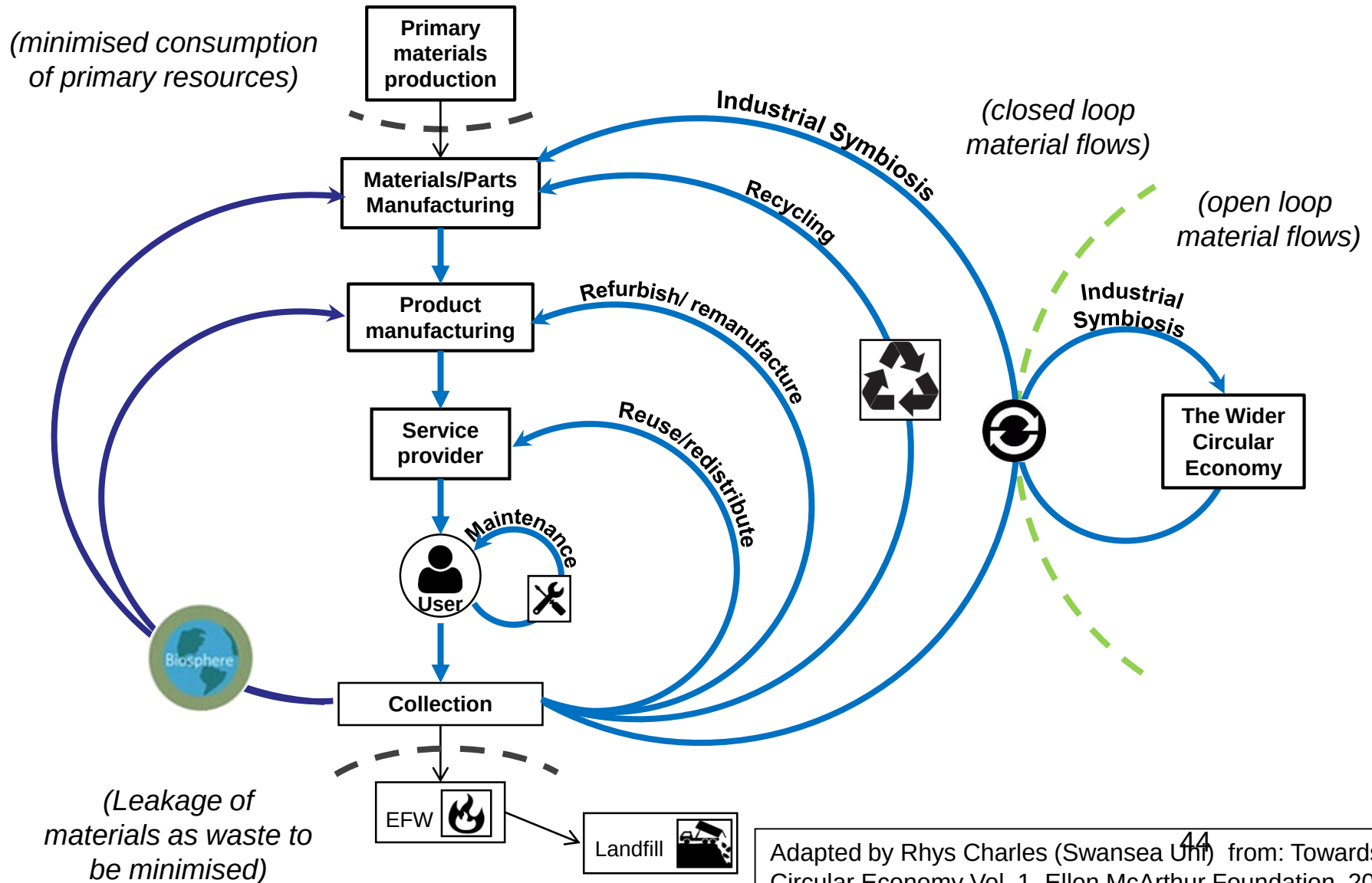
2 Can take both postharvest and postconsumer waste as an input

Material flows in a Circular Economy



Adapted by Rhys Charles (Swansea Uni) from: Towards a Circular Economy Vol. 1, Ellen McArthur Foundation, 2013.

Material flows in a Circular Economy



Circular economy contribution to well-being goals

Goal	Circular economy contribution
A prosperous Wales	• Potential savings to the Welsh economy of over £2 billion by it adopting a circular economy • Potential for up to 30,000 jobs to be created in Wales through moving towards a circular economy. • Significant carbon savings.
A resilient Wales	• Reduced consumption of natural resources in Wales, and reducing the threat of the need to exploit more natural resources in Wales due to the potential for increased global competition for critical raw materials – thus helping reduce impacts on biodiversity. • Less wastage of food leading to reduced need for food production, leading to reduced impacts on habitats and biodiversity both in Wales and around the world; • Reduced greenhouse gas emissions associated with the production of goods consumed in Wales, and a reduced impact of climate change on biodiversity; • Greater resource resilience / security of supply for manufacturing.
A healthier Wales	• Protecting and improving health through reducing emissions associated with waste and its management • Improving health by reducing poverty through creating jobs in the circular economy, saving money (eg. Love Food, Hate Waste) and through the provision of free / low cost household items (via reuse)

Circular economy contribution to the well-being goals

Goal	Circular economy contribution
A more equal Wales	• Providing jobs, training, skills across a diverse range of the population • Providing surplus food and high quality, affordable second hand domestic goods to those in poverty
A Wales of cohesive communities	• Involving and engaging communities in sustainable waste management, including repair, remanufacturing, recycling, reuse and surplus food redistribution
A Wales of vibrant culture and thriving Welsh language	• Further embedding sustainable development behaviours and cultures within people • Using the arts as appropriate to help with raising awareness and behaviour change, and • Using the Welsh language creatively in communications • Making art / craft out of recycle – ‘upcycling’
A globally responsible Wales	• Making an important contribution to the Welsh Government’s one planet resource use goal; • Lower demand for other raw materials sourced from around the globe, leading to reduced mining, destruction of ancient forests and exploitation of other undeveloped habitats, thus protecting species and biodiversity;

Progress so far in Wales – meeting targets

- **Municipal waste**
 - **64%** recycling in 2016/17
- **Commercial waste**
 - **68%** recycling in 2012 (**37%** in 2007)
 - Removing the wholesale and retail sector's data results in a rate for the other sectors of **55%** in 2012 (compared to **32%** in 2007).
- **Industrial waste**
 - **50%** recycling in 2012 (**59%** in 2007)
 - Removing the energy sector's data results in a rate for the other sectors of **62%** in 2012 (compared to **64%** in 2007).
- **Construction and demolition waste**
 - The preparation for re-use, recycling and other material recovery rate was **87%** in 2012



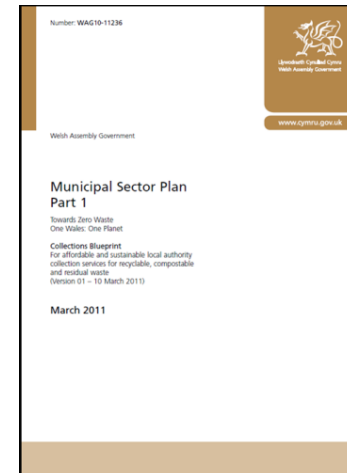
Tackling municipal waste – the regulatory approach so far

- Landfill Allowances Scheme – LAS (Wales) Regulations 2004
- Statutory Local Authority recycling targets under the Waste (Wales) Measure [Act] 2010
- Statutory guidance (Wales only) on separate collection (regulation 13 of the Waste (England and Wales) Regulations 2011)



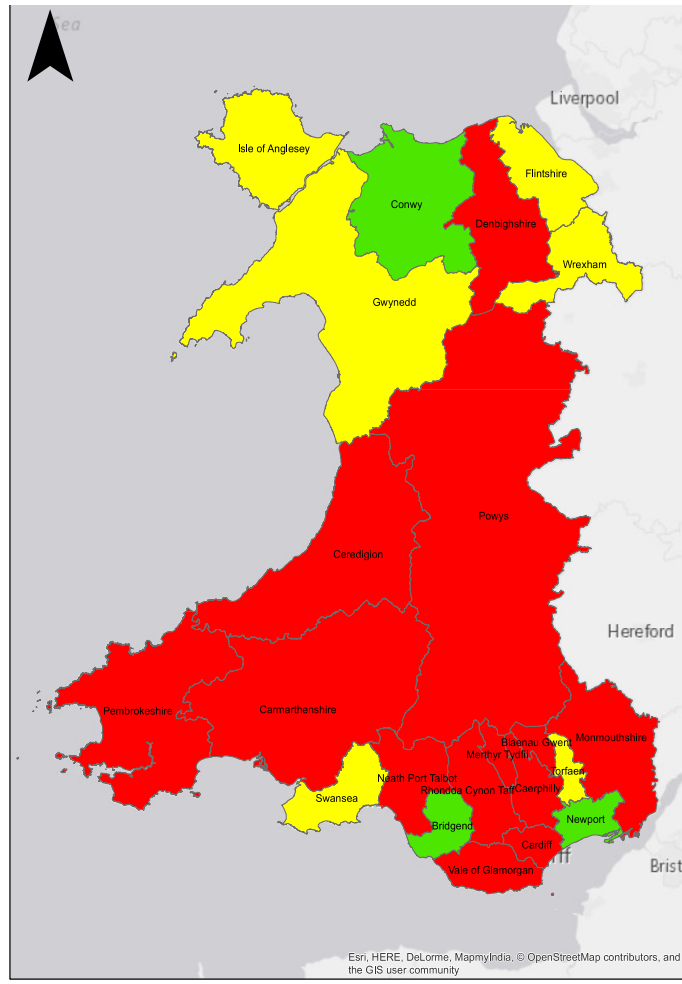
The Collections Blueprint 2011

- Weekly dry/food collection via a simple **kerbside sort** system (3 containers for dry)
- Fortnightly residual waste collection from 140 litre wheeled bins, with a no side waste policy
- Use of modern single pass Resource Recovery Vehicles
- HWRCs achieving at least 80% recycling rate
- A maximum of 30% of non-recyclable waste to be sent to energy efficient EfW with IBA recycling.
- **NOT MANDATORY**

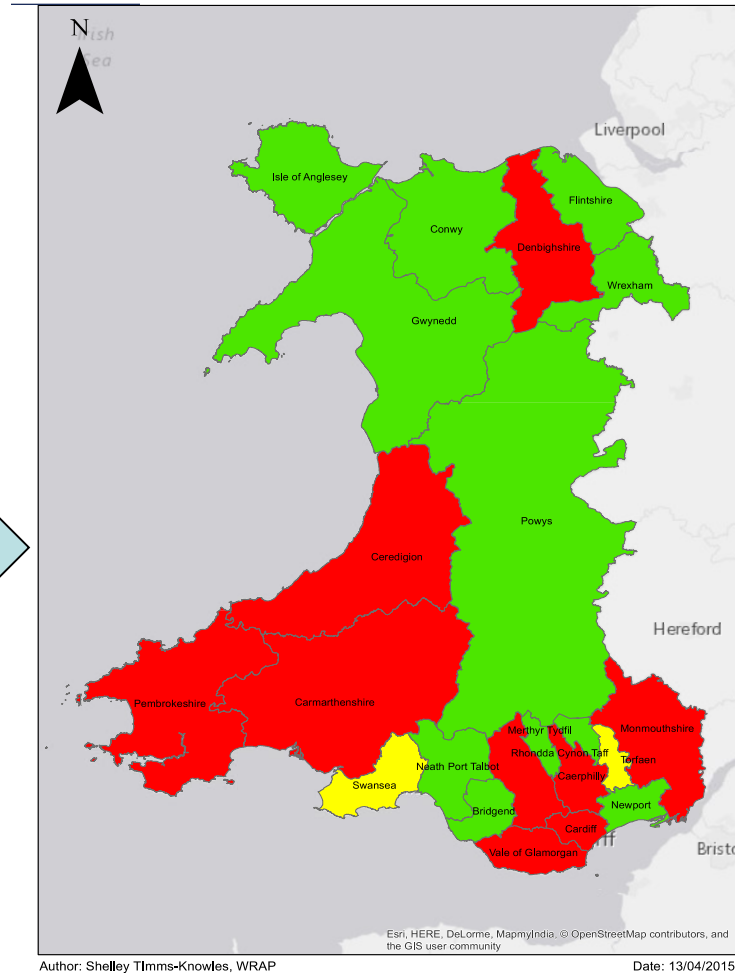


Recycling quality / consistency – results so far – the move towards Collections Blueprint kerbside sort (green)

2013 (3 Blueprint)



2015 (11 Blueprint)



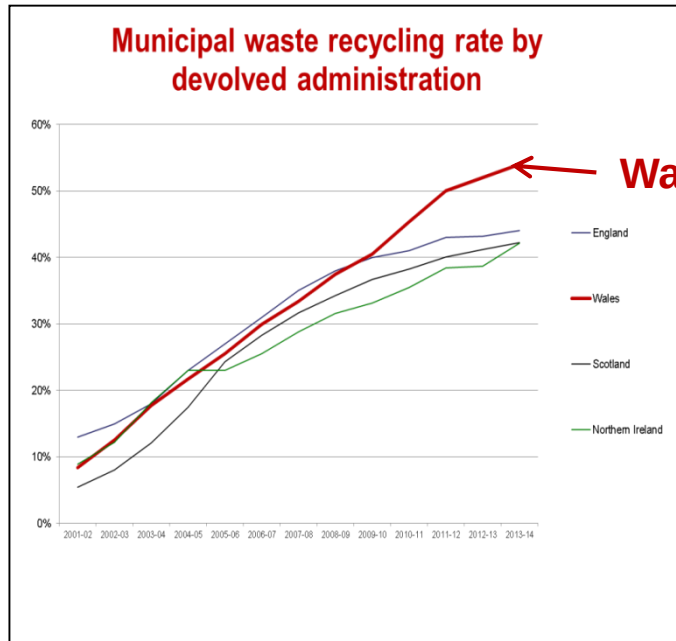
Author: Shelley Timms-Knowles, WRAP

Date: 13/04/2015

KEY:

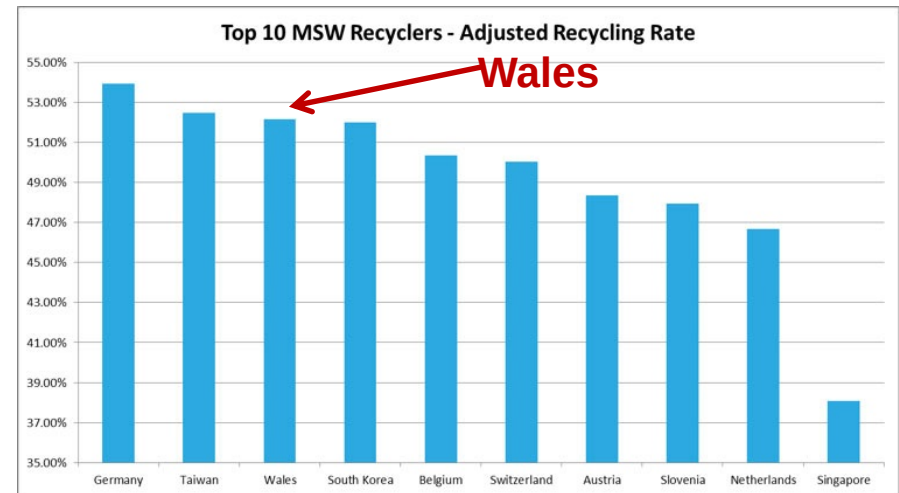
	Collections Blueprint – kerbside sort		Multi-stream but not Blueprint		Single & twin stream co-mingled
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Results - recycling quantity – Wales v others



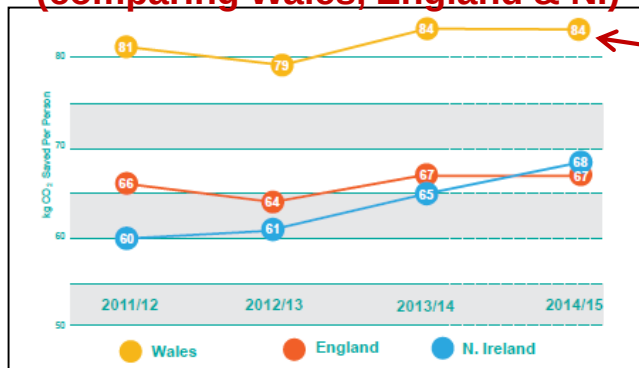
Wales

World recycling league table (%)



Wales

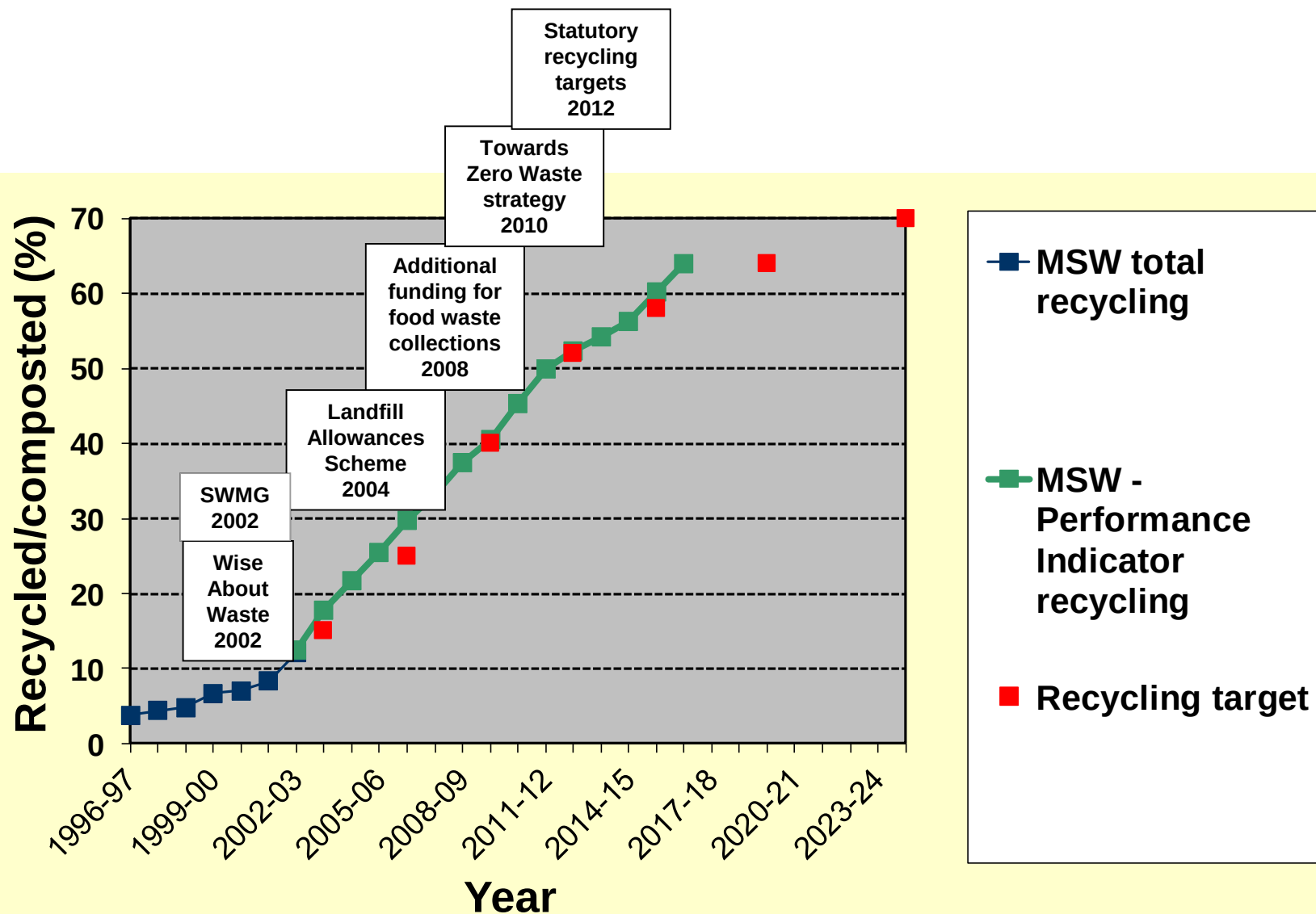
Carbon reductions from recycling (comparing Wales, England & NI)



Wales

Source: Eunomia Recycling Carbon Index 2014-15

Wales municipal waste recycling rates & targets & key policy interventions



Common steps to improve food waste capture in Wales

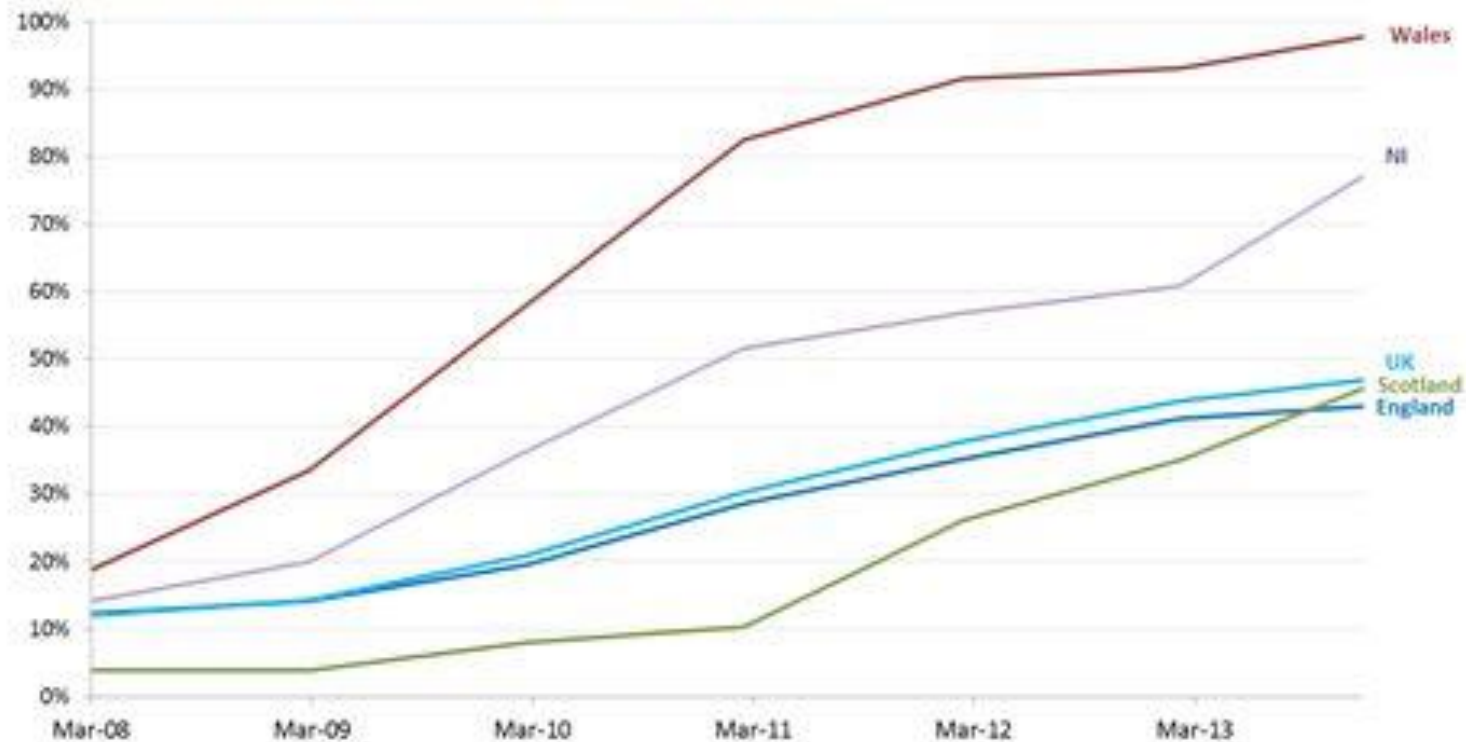


- All residents provided with kitchen caddies
- Most provided with free liners
- Residual restrictions – reduced frequency, smaller bins or restriction on number of bags
- Stickers on residual bins – ‘no food waste’
- Intensive communication campaigns
- Door knocking

Comparison of food waste collection service provision across the UK – 2008-2014



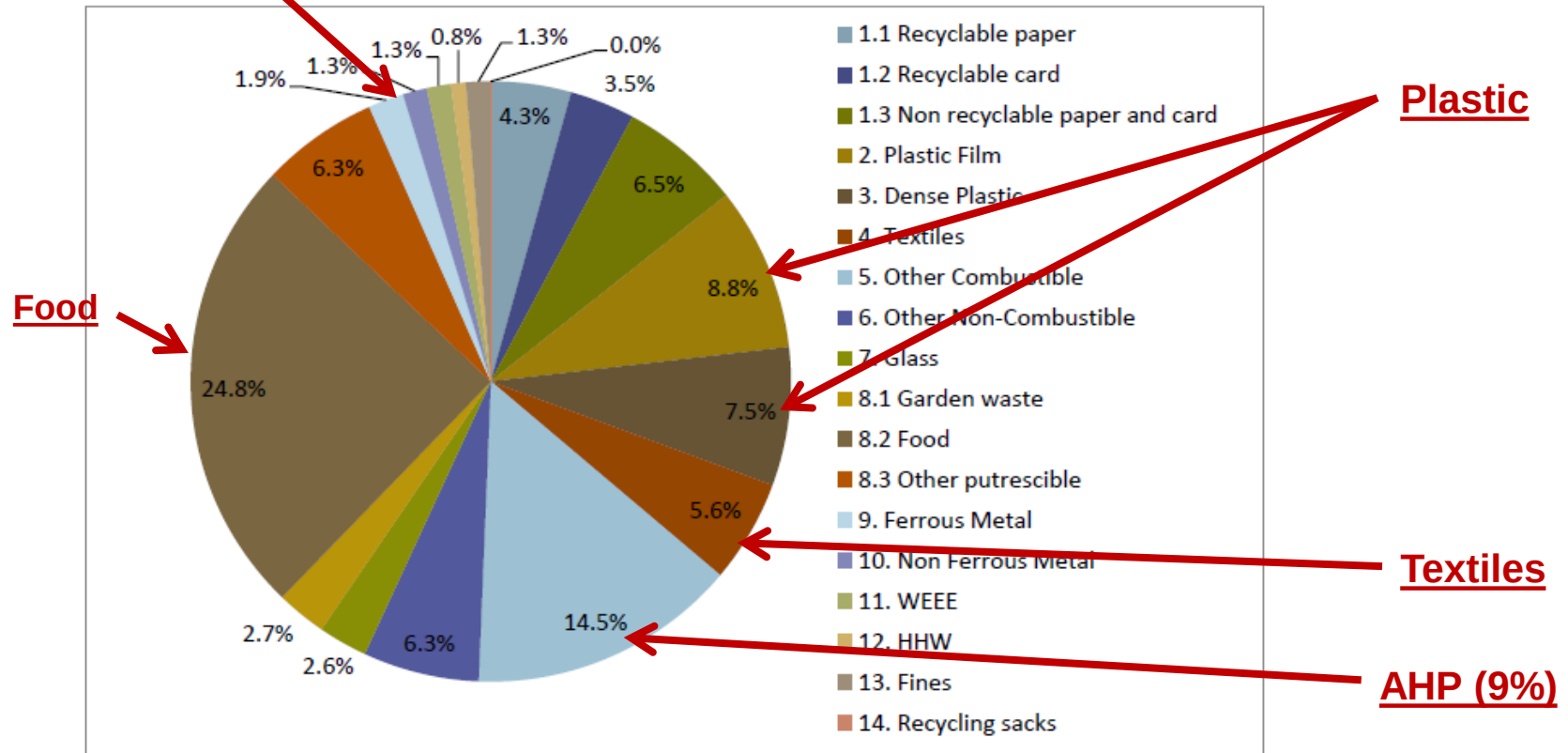
Percentage of **households** with food waste collections (mixed or separate)



Have we got all of the easily recyclable material out of the residual bin? – No!

Aluminium

Figure 3 Composition of kerbside collected residual waste in Wales 2015

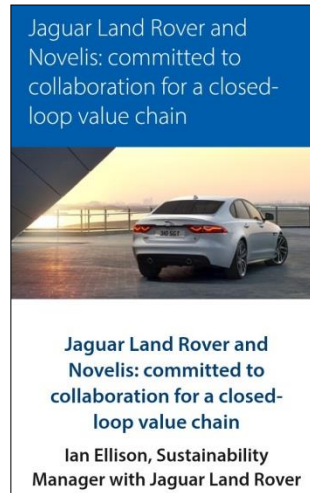


Food = ~ 25%

Easily recyclable 'dry recyclables' = ~25%

Where next for Wales?

We mustn't get left behind - the positive responses worldwide (some of them)



Potential news ways of working - overview

- Recycling is an essential component of a move to a circular economy, but reducing the first use of resources through alternative Circular Economy Business Models (CEBMs) has the potential to make a much bigger impact.
- A circular economy requires a more systems-thinking led approach and an increased focus on specific areas of “circularity” – i.e. durability, repair, reuse, remanufacturing and the sharing of resources.
- Using less raw material per unit product is also very important.

Potential news ways of working - I

A few examples of CEBMs include:

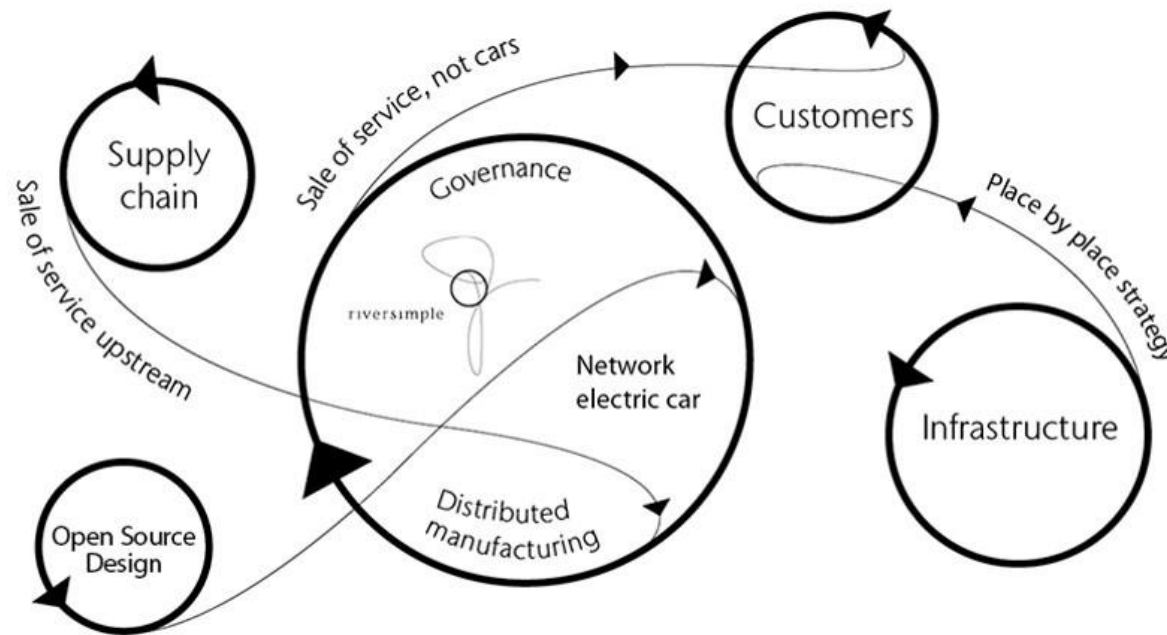
- **Service systems** – provision of a service based upon performance outputs. The manufacturer or retailer retains ownership, and thus is incentivised to produce a more durable, repairable, upgradable and reliable product.
- **Design for second or more life** - products could also be designed for dismantling, remanufacture and re-use. e.g. office chairs.
- **Hire and leasing** – long term hire and leasing to drive a longer service life and to increase product durability – e.g. leasing of photocopiers.
- **Material resource custody** – lifetime ownership/custody of the materials in the products leased/hired/sold (bar/QR coding of critical components?)
- **Collaborative consumption** – sharing of the use of rental products or services between organisations/consumers where each partner only needs limited use of the service/product. e.g. DIY tools in a local community.
- **Incentivised return and reuse** – encouraging the return of used items through take-back or re-use schemes, e.g. mobile phones.

Potential news ways of working - II

A few further examples of CEBMs include:

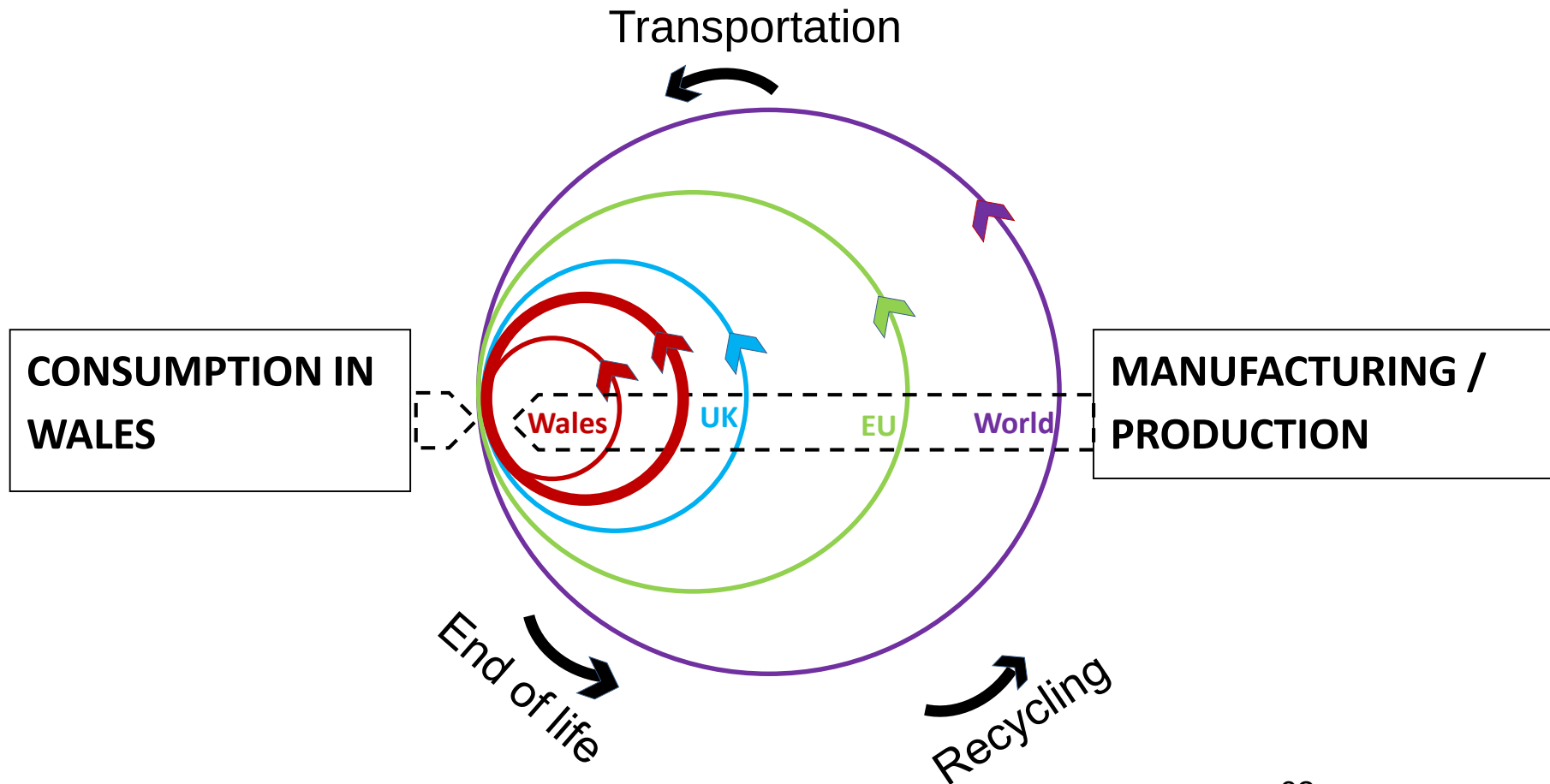
- **Designing for better asset management at end of life** – designing the product and service to improve the end of life management of assets/ items by the user, through ensuring easier collection (e.g. take back), re-use, and refurbishment or resale e.g. of redundant equipment, including carpet tiles
- **Longer life** – products designed to have a long life time with durability, reducing overall consumption and raw material mining, e.g. high end washing machines.
- **Made to order (just in time)** – manage just in time production, especially supply chains for raw materials/components, to avoid potential losses from over-stocking products, damage/deterioration in storage and/or changes in fashion / customer requirements. Helps create local supply chains, and minimises transport impacts.
- **Valorising waste products** – maximising the value from waste, where one business' waste is another business' source of valuable raw materials – e.g. industrial symbiosis.

Wales case study: The ‘Riversimple’ hydrogen fuel cell car

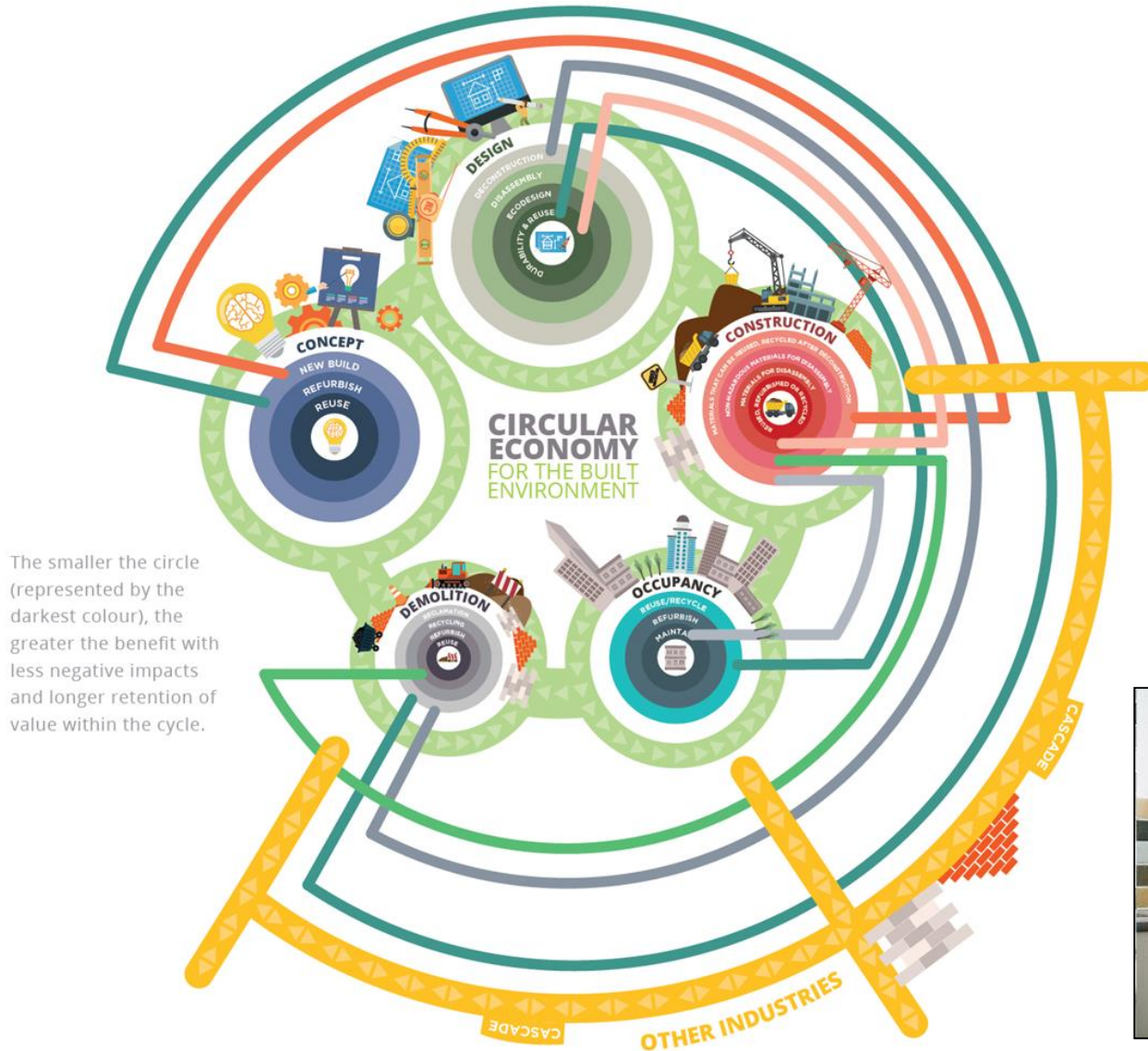


- “Riversimple is aiming to offer customers the first affordable, hassle free, fun-to-drive eco car, delivered as a complete and cost-transparent service.
- We’re not selling products. We’ll retain ownership of the cars and sell mobility as a service.
- We’ve created a simple pricing structure that enables customers to pay a single monthly fee that covers everything – the car, the maintenance, the insurance, the fuel. That way customers have all the pleasure but none of the hassle of ownership. When a customer returns a car to us at the end of their contract, we offer it to the next customer.
- We’re building a distributed manufacturing model. We don’t need massive factories to achieve our goals; instead we’ll build human-scale, profitable operations near the markets they serve – each will produce around 5,000 cars a year.”

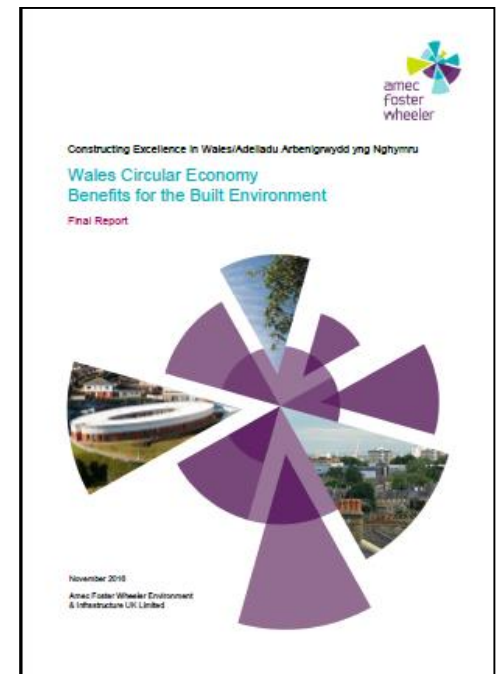
Material circles reflecting Wales' place in the global economy – consumption in Wales and sources of production



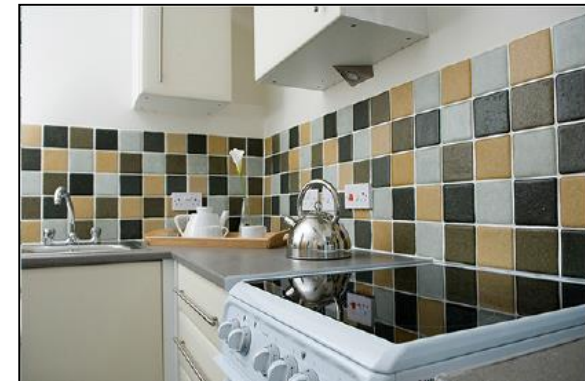
Circular Economy for the Built Environment



The smaller the circle (represented by the darkest colour), the greater the benefit with less negative impacts and longer retention of value within the cycle.



Constructing Excellence in Wales

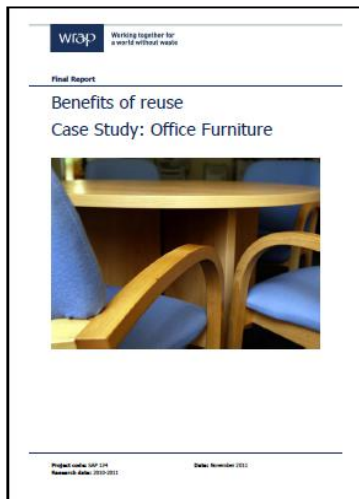


Recycled glass tiles (Tyra Oseng-Rees)

Some thoughts on reuse in the built environment



- Salvage / architectural reclamation
- Reuse of tools, nails, paint, offcuts, soil etc
- Design for disassembly
- Collect off cuts and use first instead of new materials.
- Co-ordinate trades so left over materials from one can be used by another.
- Fix temporary materials (e.g. timber hoarding) so they can be dismantled and reused many times.
- If you can't reuse materials on the same project aim to use on others.
- Return, sell or donate unused and salvaged materials.
- Repair items (e.g. pallets) so they can be reused or returned to the supplier.
- Use remanufactured furniture



Public Health Wales – new Cardiff office: procurement of reused/remanufactured equipment



- 94% of 2,500+ items re-used or secondhand
- 134 tonnes CO₂ emissions saved
- 41 tonnes waste to landfill diverted
- 2,435 hours of employed work for 8 disabled people
- 12% pre-loved carpet tiles
- 3 people - full time work
- **Third sector** can continue social objectives in deprived areas
- **Replicated in Swansea in 2017**



Key to current and future success

- So far, so good:
 - Leadership
 - Believing in SD
 - Use of regulatory instruments where effective
 - Getting high levels of high quality recycling through investment / evidence / persuasion!
- Need more:
 - Use of recyclate in goods manufactured in Wales
 - Circular economy business models to reduce overall consumption of materials
 - Through
 - Harnessing of the power of public sector procurement
 - Innovation

Doing even more in Wales

- Develop regulations under Part 4 of Environment (Wales) Act
- Commissioned a study on extended producer responsibility options (including DRS) for key food and drink packaging
- To consult on an 80% municipal waste recycling target (for 2035?)
- To develop an enhanced behaviour change campaign to persuade the non-recyclers to do their bit
- To consult on a target to halve food waste by 2025
- To consult on a Route Map for a Resource Efficient Wales by mid 2018
- To produce a Plastics Route Map for Wales, to create better markets for plastic recycle
- Embed resource efficiency / CE business models in:
 - Innovation support
 - Public procurement

Environment (Wales) Act 2016 – Part 4 – Collection and Disposal of waste



- The Welsh Ministers can require:
 - All businesses and public sector bodies to keep recyclable materials separate at source (including food)
 - Recyclable materials to be collected separately
 - A ban on recyclable wastes to EfW
 - A ban on the disposal of food waste to sewer (not including from households)
- A ban on recyclable wastes to Landfill – powers to bring in regulations already exist under the Waste (Wales) Measure 2010

Environment (Wales) Act 2016 – increasing recycling of key recyclable materials in commercial and industrial waste



Extended Producer Responsibility

Towards Zero Waste 2010

Key principles

“Extended producer responsibility

- *By extending producer responsibility, producers need to meet the full costs of sustainable waste management for their products.*
- *We anticipate that this would incentivise (through increased cost of waste management) using less materials or the use of materials that are easier to recycle instead.*
- *Extended producer responsibility includes the encouragement of the design of products in order to reduce their environmental impacts and the generation of waste in the course of the production.”*



Desired outcomes that could potentially be delivered through EPR (initial thoughts)

Need a solution that:

- 1.Ensures that producers bear 100% of the net cost of the management of the products and packaging they put onto the market (including tackling litter, behaviour change etc).
- 2.Increases the amount of waste reduction, reuse and recycling.
- 3.Increases the recycled content of each product and its packaging.
- 4.Ensures that products and packaging that can't be reused or recycled bear a higher proportion of the cost.
- 5.Tackles effectively the litter arising from the product and/or its packaging.
- 6.Engages the whole supply chain.
- 7.Drives behaviour change.

EPR – Cost burden transfer



“One of the main objectives of EPR is to shift the financial responsibility for treating end-of-life-products from local public authorities to producers (and ultimately consumers) thereby reducing the burden on public budgets and taxpayers.”

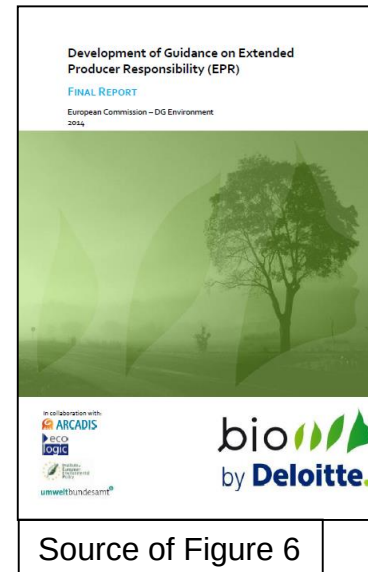
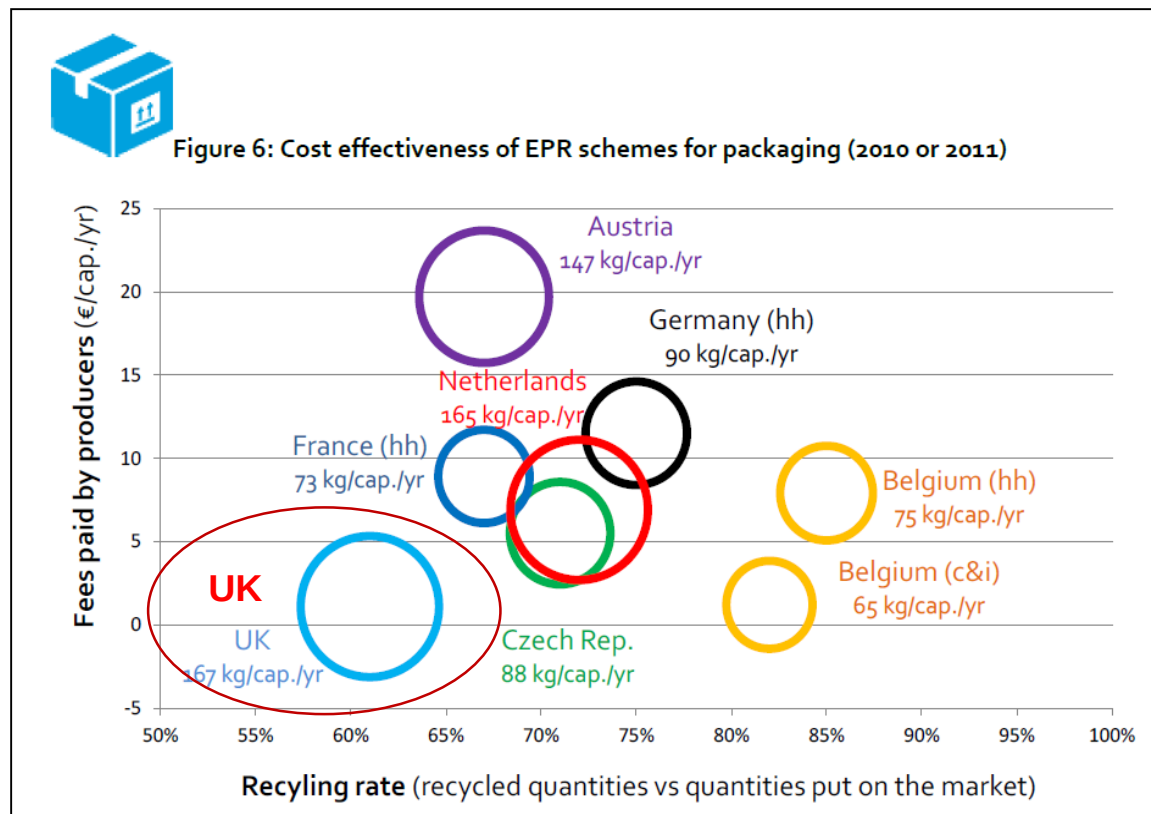
OECD *‘Extended Producer Responsibility – Updated Guidance for Efficient Waste Management’* 2016.

<http://www.oecd.org/env/extended-producer-responsibility-9789264256385-en.htm>

Potential products that could be considered for an EPR approach (non exhaustive and in no priority order)

- All / selected food & drink packaging (including on-the-go) – to pay for their recycling and litter prevention and clean up
- Absorbent hygiene products (eg, nappies) – to fund recycling;
- Disposable items – e.g. plastic cutlery – to promote waste prevention and reuse
- Cigarettes – to fund anti-littering messages, recycling bins for cigarettes butts, clean ups
- Chewing gum – ditto
- Agricultural plastic film – to fund recycling
- Mattresses – to fund recycling infrastructure
- Carpets – to fund recycling infrastructure
- Furniture – to fund repair and reuse
- Tyres – to fund recycling infrastructure
- Small WEEE – to fund reuse and recycling infrastructure
- etc, etc

Case study – Producer responsibility for packaging in the UK – are “full costs” borne by the obligated producer?



Source of Figure 6

- “Fees paid by producers range from **1.1 EUR/cap. (UK, 2011)** to 19.7 EUR/cap./yr (Austria, 2012).
- In the UK, it is estimated that the fee covers only 10% of the total cost of the system**, whereas in most other schemes, 100% of net costs are covered (80 % in France).”

How will leaving the EU affect the development of a more circular economy in Wales?

- Wales does sustainable waste management because it's the right thing to do, not because the EU tells us to do it.
- The Welsh Government and Welsh public bodies have a statutory duty to carry out sustainable development.
- We have already set waste prevention and recycling targets greater than those proposed in the EU Circular Economy Package.
- We have to set objectives to maximise our contribution towards the well-being goals.
- We have strong policies on reducing carbon emissions and on natural resource management.
- Waste is a fully devolved function. There is EU waste policy and legislation, and there is waste policy and legislation separately for Wales, England, Scotland and Northern Ireland. There is no provision (at the moment) for a UK waste policy or legislation (unless agreed by the administrations).

Key next steps

- 6th year evaluation of waste plan (by end 2017)
- Develop regulations under the Environment Act) in 2018
- Welsh Landfill Disposal Tax – 1 April 2018
- Consult on a revised waste plan / resource efficiency route map – by mid 2018
- Produce a revised plan / resource efficiency route map by mid 2019



Achieving the vision - in conclusion

To achieve a circular economy, and our well-being goals, Wales, and its people need:

- A far bigger focus on the inner CE circles – eco-design, longer life, more reuse etc
- A resource management industry leading the drive towards a circular economy for Wales, and providing maximum social benefit
- With a consistent, high quality, source separated approach to recycle collection (Collections Blueprint)
- With manufacturing businesses becoming more resource efficient
- And retailers playing their part to improve sustainable consumption and accept extended producer responsibility
- To collectively tackle the problem of plastic pollution
- And with effective working with industrial, commercial, public sector and public audiences to achieve a circular economy in Wales, or as close to it as we can feasibly get!



Is there a better way?



‘Biomimicry’

A final thought...

‘How do we get out of this mess’?

‘So we must lead this shift ourselves. People with strong intrinsic values must cease to be embarrassed by them. We should argue for the policies we want not on the grounds of expediency but on the grounds that they are empathetic and kind; and against others on the grounds that they are selfish and cruel. In asserting our values we become the change we want to see.’

‘The Values of Everything’ George Monbiot 2010 in ‘How did we get into this mess’, G.Monbiot, 2017: 285-289, London, Verso.



Helpu Cymru i leihau
ei Hôl Troed Carbon

Help Wales reduce
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