

**BE THE WAVE  
AR FRIG Y DON**

# Circular Economy

Background Information



cadwch keep  
gymru'n wales  
daclus tidy

**MARINE  
CONSERVATION  
SOCIETY**



UNDEB EWROPEAIDD  
EUROPEAN UNION



Llywodraeth Cymru  
Welsh Government

**Cronfeydd Strwythurol a  
Buddosodi Ewropeaidd  
European Structural  
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Ariennir gan  
Llywodraeth Cymru  
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Welsh Government



Everything around us has come from the same place - planet earth.

Our world provides all the ingredients and the raw materials for producing all the things we wear, eat, play with, cook with, package our things in...everything! Making things from scratch uses a lot of energy and the processes can also be harmful to the planet and all that lives here, not to mention the fact that the planet only has so much raw materials, that will eventually run out. There's also the issue of what we do with these things after they've stopped being useful to us.

A Wales with a more Circular Economy means that all this 'stuff' will have a much longer lifespan and we move away from a 'single-use' or 'disposable' culture and look to extend the lifetime of all the things that we own. In a more Circular Economy, it will be easier to reuse and repair items before eventually being able to recycle them into something useful.

[This document](#), produced by the Welsh Government, helps to explain in more detail.

**What's the problem for our oceans?**

Many of the end products of our 'take-make-dispose' or 'linear' economy end up in oceans in the form of single use plastic packaging and items that have been discarded and do not decompose naturally. As well as this direct impact, currently 45% of total global carbon emissions come from the way the world produces and uses everyday products, generated through the energy required to extract raw materials and process and manufacture them into goods.

Carbon emissions, and the climate change that they cause, have a profound impact on the entire planet, including the marine ecosystem. An increase in atmospheric CO<sub>2</sub> leads to greater absorption by the oceans, resulting in a reduction in the pH of the water (more acidic). This acidification, along with a general increase in water temperature both have the potential to catastrophically impact all sea life.

The Circular Economy seeks to go beyond recycling and a crucial part of the model is how products are manufactured in the first place, making them easy to infinitely reuse, repair and ultimately recycle into useful products.

**Is it not just the same as recycling?**

Some items are ideal for recycling, aluminium, for example, can be recycled over and over again whilst maintaining the properties that make it so useful to us. The problem with plastic, on the other hand, is that its recycling is more of a downward spiral than an infinite loop. Plastics are usually sorted, cleaned, shredded, melted and remoulded. Each time plastic is recycled this way, its quality is degraded. The new, lower grade plastic often becomes unsuitable for use in food packaging and most plastic can be recycled a very limited number of times before it is so degraded it becomes unusable.

Therefore, until improvements can be made to the current process, recycling alone isn't the answer to the issue of decreasing resources and increasing waste. Ultimately, designers and manufacturers need to adjust the way products are made. However, along the way we can all help to achieve a Circular Economy by following the 'Hierarchy of Rs': 1<sup>st</sup> Reduce - 2<sup>nd</sup> Reuse - 3<sup>rd</sup> Repair - 4<sup>th</sup> Recycle.



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