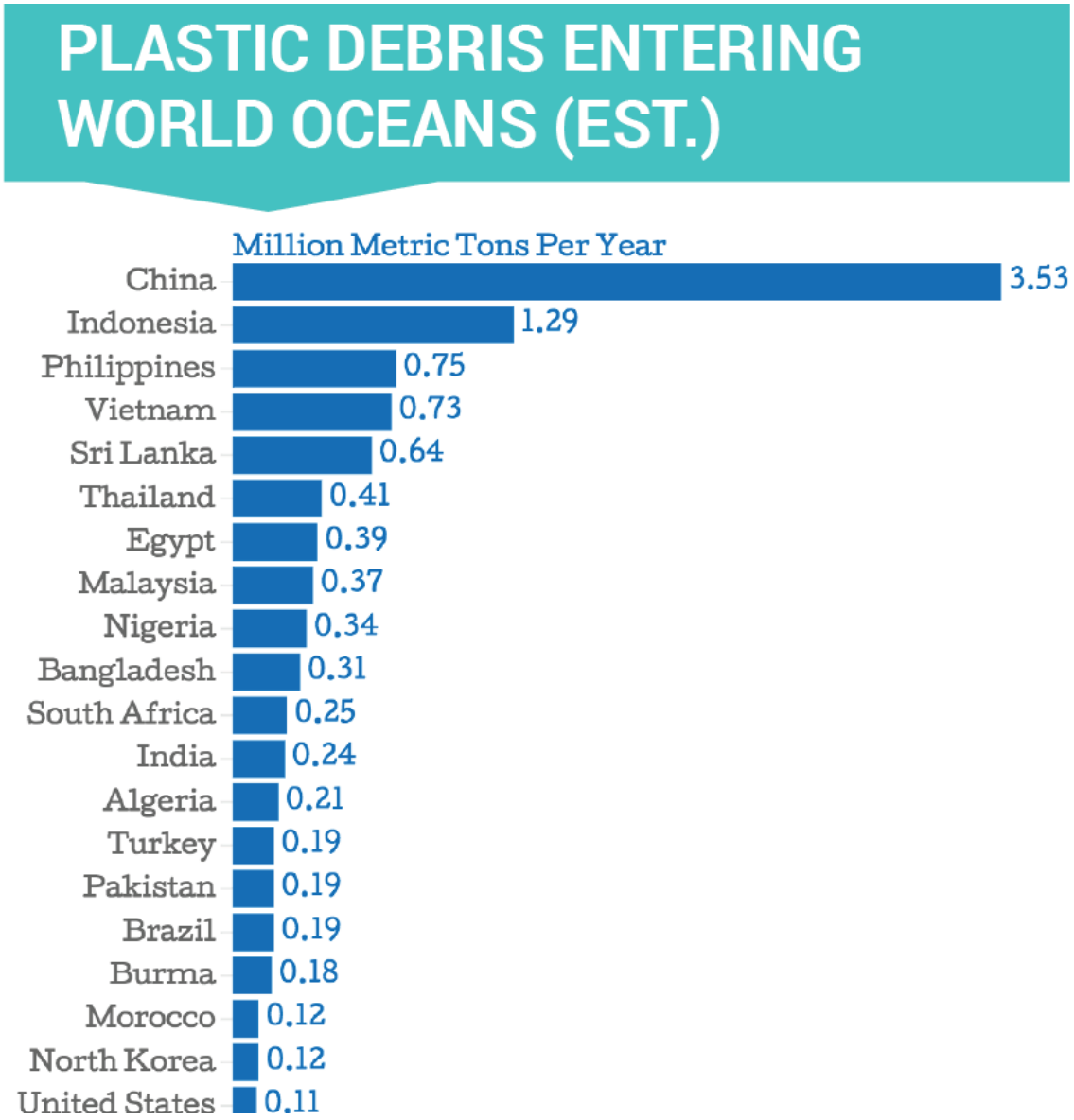
Myths About Plastics

Myth 1 More plastic in the ocean than fish by 2050 and mostly derives from Europe and the USA.

This myth is not substantiated, it is based on future projections/assumptions that overfishing will continue unchecked. Overfishing is a key environmental concern being addressed internationally. It is also based on the assumption that the most polluting countries in the world will continue to do so without the development of any waste management infrastructure. According to the World Bank nearly a quarter of the world population has no access to any waste management infrastructure. In addition, the UK only accounts for 1% of all solid waste.

The majority of plastics that enters the world's oceans does not derive from Europe and the USA, please see the following data.



Source: Jenna R. Jambeck, Roland Geyer, Chris Wilcox, Theodore R. Siegler, Miriam Perryman, Anthony Andrady, Ramani Narayan, Kara Lavender Law. Plastic waste inputs from land into the ocean. DOI: 10.1126/science.1260352

Plastics entering the world's oceans is a global concern. To tackle this issue at source the plastics industry as well as several brands and individual companies, have launched projects to prevent leakage into the environment.

Nearly fifty companies across the plastics value chain have joined the Alliance To End Plastic Waste and together they have committed to invest US$1.5 billion towards solutions that will prevent the leakage as well as recover and create value from plastic waste. The ambition, over five years, is to divert millions of tons of plastic waste in more than 100 at-risk cities, improve livelihoods for millions and contribute to a circular economy. (Alliance To End Plastic Waste, 2020). To find out more click here.

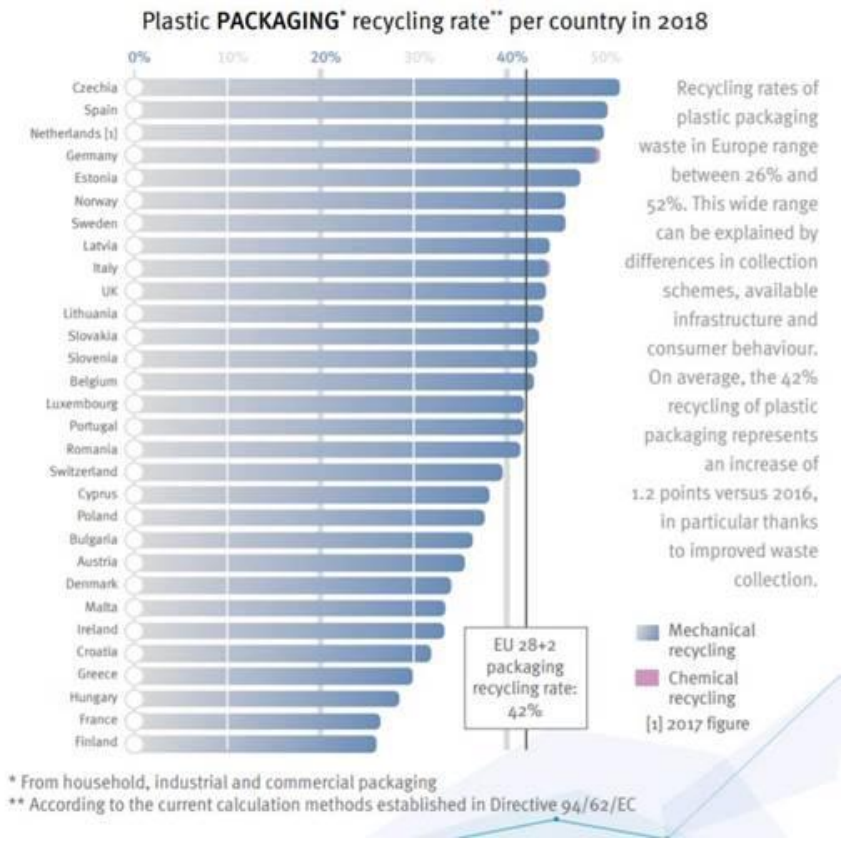
In 2011 a voluntary global plastics industry pledge was declared to form a Global Plastics Alliance (GPA). It was formed to collaboratively source solutions for marine litter and currently has 75 plastics organisations and associations in 40 countries signed up to participate. Through this collaboration a number of projects and events have been taken place and continuing worldwide initiatives take effect. To find out more click here.

Further information on the sources of marine litter, solutions and initiatives please visit www.marinelitterthefacts.com

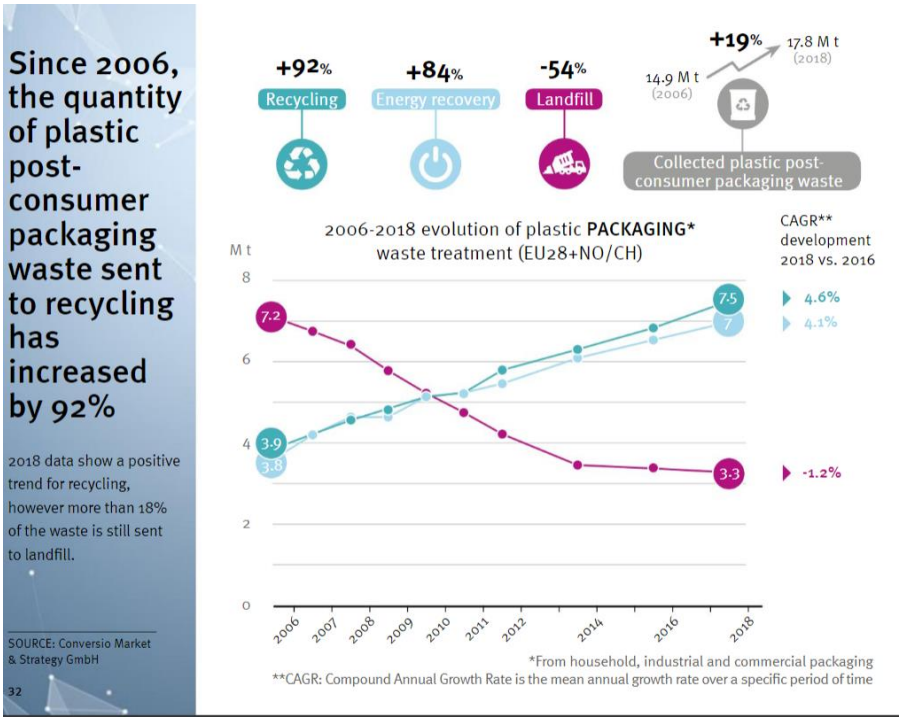
Myth 2 - Only 7-12% of plastics gets recycled.

Within the UK 78% of all plastic packaging is recovered. Whilst 46% of plastic packaging is recycled (National Packaging Waste Database, 2019). 60% is exported for recycling due to a lack of sufficient UK recycling infrastructure.

The UK plastic packaging recycling rate is above the average for the EU and makes the UK 10th in the EU. The UK is above the EU average of 42%.

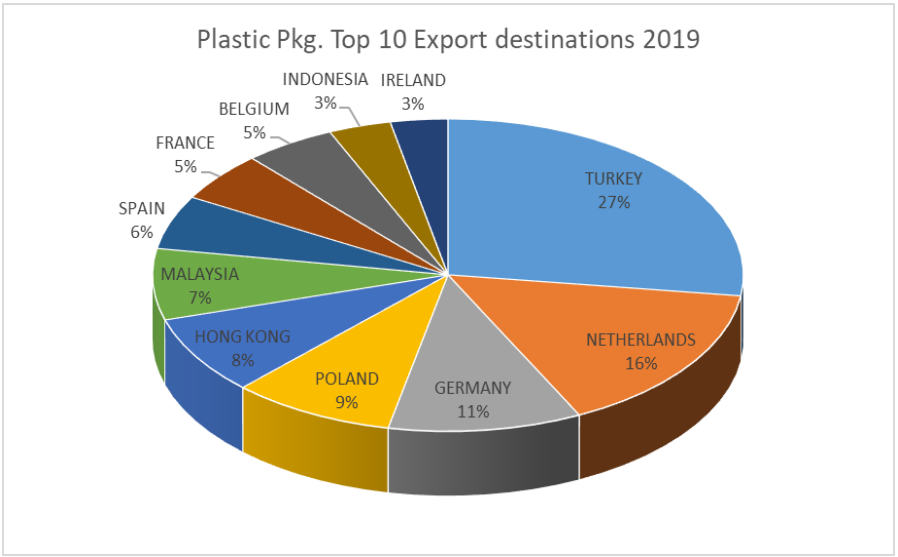


Throughout the EU there has been a steady increase in recycling rates for plastics, since 2006 plastics sent for recycling has increased by 92%, whilst landfill has decreased by -54%.



In addition, the BPF and the industry is working with all stakeholders to ensure all plastic packaging can be recycled or reused and is playing an active role in voluntary initiatives like the Plastic Pact. The Plastic Pact aims to ensure that by 2025 all plastic packaging is recyclable, reusable, or compostable and to achieve peak recycling rates by 2030. But to achieve this goal the UK will need to join the rest of Europe in collecting all plastic for recycling.

At present the UK plastics industry like other industries is over reliant on the export of waste for recycling. Please see the top 10 export destinations in the diagram below. The BPF would like to see reduced dependency on export markets and increased domestic recycling infrastructure. To view the BPF position statement on the export of plastic waste please click here.



Source: National Packaging Waste Database– 360 Env. Feb 2020

To decrease the dependency on the export market the UK require a well-established plastic recycling industry for all plastics and domestic investment in recycling infrastructure is critical. Government legislation can assist to accelerate investment and the transition of the plastics recycling industry to a UK-based, resource efficient circular economy. For example, the existing PRN/PERN system under the Packaging Producer Responsibility Regulations is under review with changes to the scheme coming into force in 2023. This legislation could be used as a mechanism to divert funds to develop this essential infrastructure.

Other policies which could divert critical funds to address this issue of dependency on the export market is the plastic packaging tax. Ringfenced funds could help achieve the tax objective to increase recycled content by a minimum of 30% as well as support the building of essential recycling infrastructure.

Furthermore, quality of material is key for both the UK and export markets. Defining and implementing a set of quality standards in the UK is needed to ensure only high-quality plastic waste that is uncontaminated and ready to be recycled in an environmentally sound manner can be exported. To ensure this the Basic Convention and other instruments will provide the necessary regulations and quality protocols.

Myth 3 - not all plastic is recyclable

With a combination of mechanical and chemical recycling all plastic packaging can be recycled. But to ensure this in the UK, all plastics need collecting and investment in waste collection, sorting and recycling.

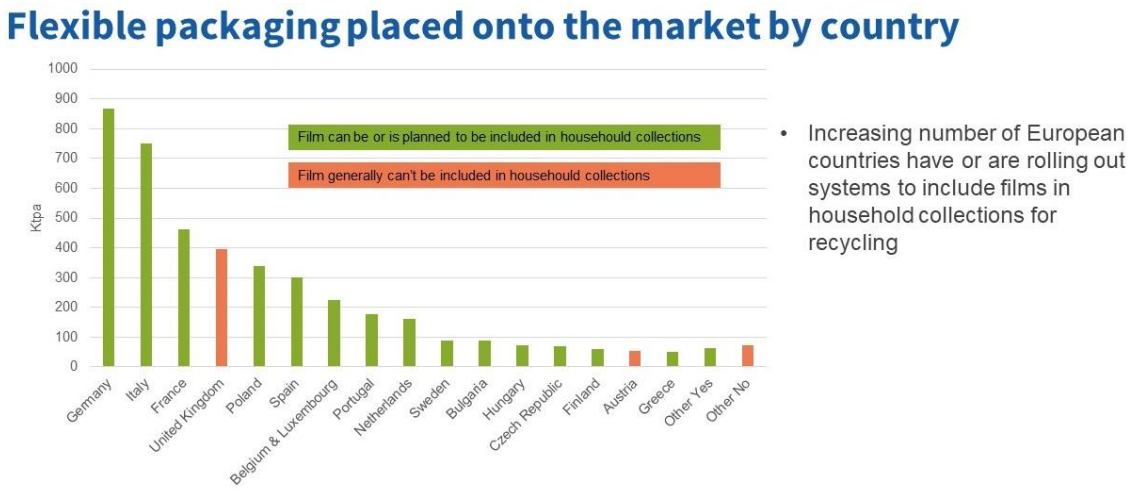
Chemical recycling is an umbrella term covering several processes aiming to convert plastic waste into chemical building blocks including monomers, to enable the production of plastics. Some of these processes are collectively referred to as ‘Feedstock Recycling’.

Chemical recycling offers the opportunity to process plastic that has high product residues and or mixed plastics waste that is difficult to recycle mechanically that would be sent to energy recovery or landfill. Chemical recycling will complement mechanical recycling. It is the missing link necessary to achieve a truly circular economy for plastics. In so doing chemical recycling will reduce Co2 emissions due to the reduced use of virgin material and the diversion of waste from energy recovery and landfill.

With a combination of current recycling infrastructure and innovations in recycling developing it is essential to ensure there are no barriers to recycling. One key barrier to recycling more plastic packaging is that within the UK not all plastic packaging is collected for recycling.

Currently a total of 28 UK councils are believed to be collecting consumer household films and flexible packaging. Some only collect shopping bags (only 6) but others collect a wide range of consumer flexible films. This limited collection equates to only 17k tonnes of film is collected from households which accounts for less than 5% of all packaging film supplied to households.

This is not the case in Europe where the widespread collection of films and flexible packaging is advanced.



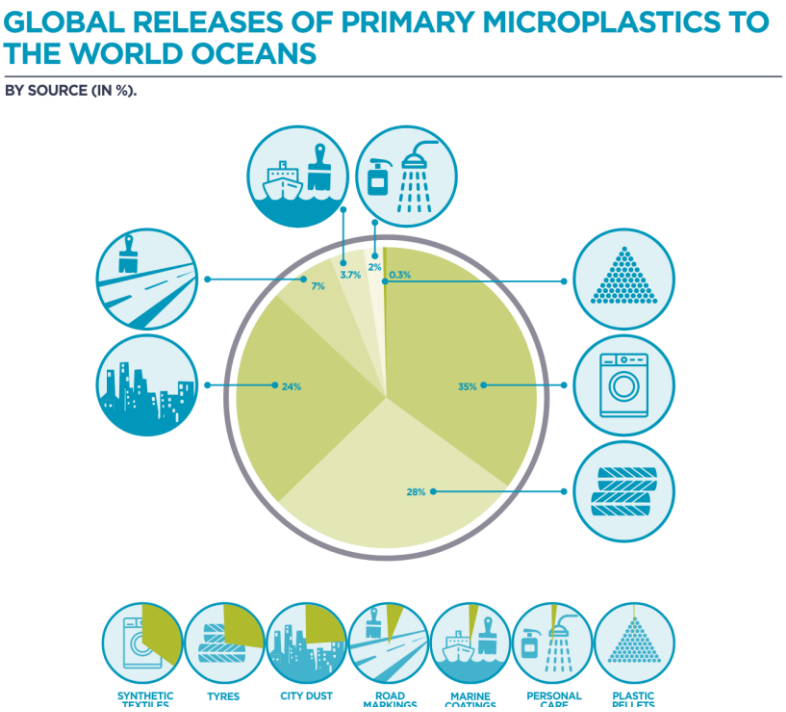
Source: Ceflex, 2020

To be able to recycle more plastic packaging we firstly need government to reform the existing legislation on consistent collections from households to collect all plastic packaging. End markets already exist to be able to recycle more packaging and this barrier to recycle more plastic packaging needs to be addressed.

Myth 4 - Plastic packaging is a major source of microplastics and health affects

Microplastics are defined as small particles of plastic, which is typically less that 5mm, whereas macro plastics are relatively large particles of plastic which is larger than 5mm.

Pre-production pellets account for an estimated 0.3% of all microplastics entering the world's oceans and the BPF run the UK initiative of Operation Clean Sweep (OCS) to mitigate the risk of leakage into the wider environment. For further information on OCS click here.



Plastic packaging is not a primary source of microplastics that enters the marine environment.

Numerous research studies into the health effects of microplastics have concluded that there are no proven health risks associated with microplastics entering the food chain. Currently, there is no evidence to say that microplastics in fish pose any risk to human health.

Usually the toxins people refer to have been in the environment for a long time. POPs (Persistent Organic Pollutants) are present from times when regulations on chemicals and fertilizers were not as strict as they are today, and sea creatures would be exposed to these regardless of whether plastic is present.

Preliminary indications show that “microplastics play a minor role among the large variety of natural particles in delivering POPs to higher trophic levels”, as reported by GESAMP Report 93, 2016. When it comes to POPs, fish are safer to eat today than they were 30 years ago.

Source: Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP) Report 93, 2016.

The industry is working together with stakeholders to progressively eliminate leakage of material into the wider environment. Are a few examples are highlighted to demonstrate some initiatives that aim to prevent leakage.

Operation Clean Sweep®

Plastic pellets, powders and flakes (collectively referred to as ‘plastic pellets’) are the building blocks of all plastic consumer goods. Plastic pellets are traded and distributed to manufacturing facilities across the world.

Many different actors across the supply chain including producers, converters, haulage and port authorities are handling plastic pellets and thus bear responsibility for implementing best practice measures to mitigate any risk of pellets escaping into the environment. Thus, mitigating the risk of pellets escaping into the environment is a shared effort among all of these actors which all play a very important part in the supply chain.

Operation Clean Sweep® is an international initiative from the plastics industry to reduce plastic pellet loss to the environment. In the UK it is led by the British Plastics Federation.

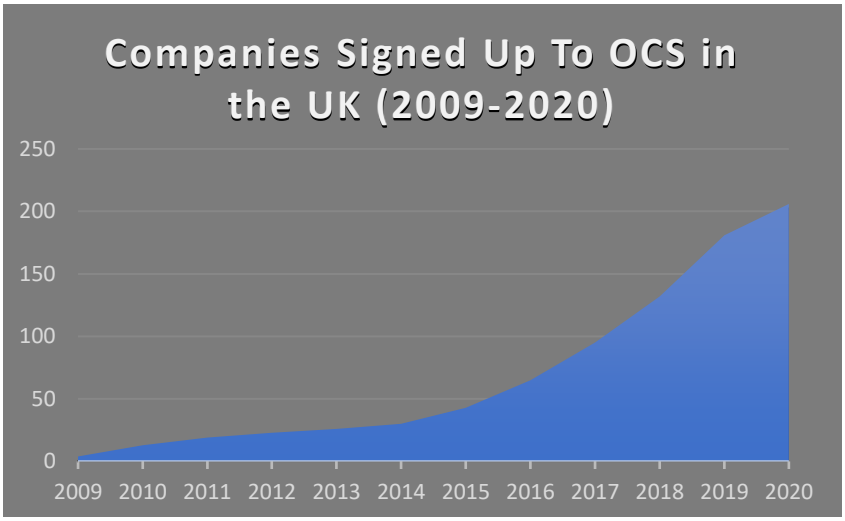
In 2009, the UK was the first country outside of North America to introduce the programme and actively work with companies across the supply chain to implement pellet loss prevention measures. Most recently, the programme celebrates an important milestone as it registered over 200 companies.[i] The UK also has the highest number of signatories per country in Europe.

By signing up to Operation Clean Sweep®, companies make a commitment to adhere to best practice and implement systems to prevent plastic pellet loss. The BPF offers a wide range of tools to support companies as part of the programme such as management and training checklists, case-studies with examples of implementation, webinars, workshops and continuous support on any matter related to pellet loss prevention.[ii]

Operation Clean Sweep® helps companies ensure that plastic pellets are contained on-site, helps demonstrate companies’ commitment to sustainability and assures others in the supply chain that plastic pellets are handled responsibly. The programme currently represents the best in class example of operational guidance and has enjoyed broad success in tackling pellet pollution in the UK.

More recently, the BPF has partnered with Marine Scotland, the Investor Forum and the environmental charity Fauna and Flora International to define the first international standardisation project on preventing plastic pellet loss in collaboration with the British Standards Institution (BSI). A Publicly Available Specification (PAS) is a fast-tracked industry standard that can be used by all actors in the supply chain to demonstrate compliance with pellet loss prevention measures. It will build on the successful track record of Operation Clean Sweep and can be used at international level by any company operating within the plastics supply chain including transport and port authorities.

Evolution of companies registered to Operation Clean Sweep in the UK.



As the loss of valuable raw material along the supply chain has serious environmental and economic consequences, the plastics industry is taking a proactive approach to successfully mitigate this risk and ensure no loss of raw material occurs within the supply chain.

Microfibers released from washing harm the environment. With each wash, countless plastic fibers from synthetic textiles are making their way from washing machines into rivers and oceans.

Guppyfriend provides a solution to tackle the issues of microfiber leaking into the ocean. It is a washing bag that reduces fiber shedding and protects your clothes. It filters the few fibers that do break and does not lose any fibers itself. For more information please click here.

Further research in the market is taking place to provide a filtration system on washing machines to automatically capture microplastics from garments leaking in the water system and then into the rivers and oceans.

Microplastics in personal care products was highlighted as one of the primary sources entering the marine environment. This issue has been addressed following a government consultation in 2018 where microbeads in cosmetic products were then phased out. Eliminating intentionally added microplastics directly addresses this channel of leakage.

The plastics industry supported the desire to eliminate their use, where possible, because water treatment plants currently cannot remove these effectively and prevent them finding their way into the oceans.

Myth 5 – Plastic packaging consumption is increasing exponentially.

Plastic packaging waste is **1%** of all waste generated in the UK and **20%** of all packaging waste.

We already recover **78%** of plastic packaging in the UK.

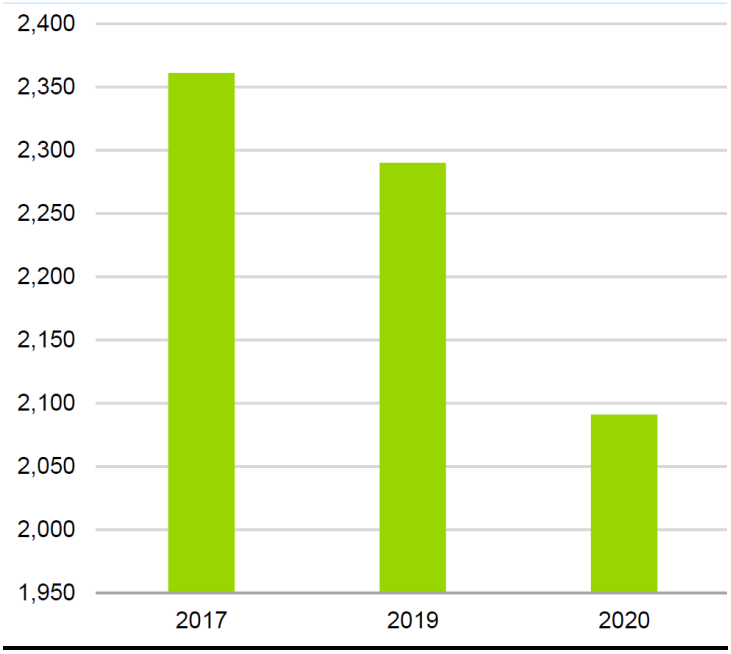
Plastic packaging waste in UK was 2080kt in 2006 and forecast to be 2018kt in 2020. Therefore in per capita terms in the UK over the last 14 years it has fallen by **13%.**

Plastic packaging waste and consumption in the UK has decreased during the Covid-19 outbreak not increased due to the collapse in demand from industries associated with hospitality and those industries most impacted by the COVID 19 outbreak.

Therefore placed on the market data for packaging gas decreased due to Covid-19 and continued innovations to lightweight materials and use the least amount of resources as possible.

Even before Covid-19 struck, consumption of single use plastic was showing a reduction in per capita consumption. Source industry and government waste data.

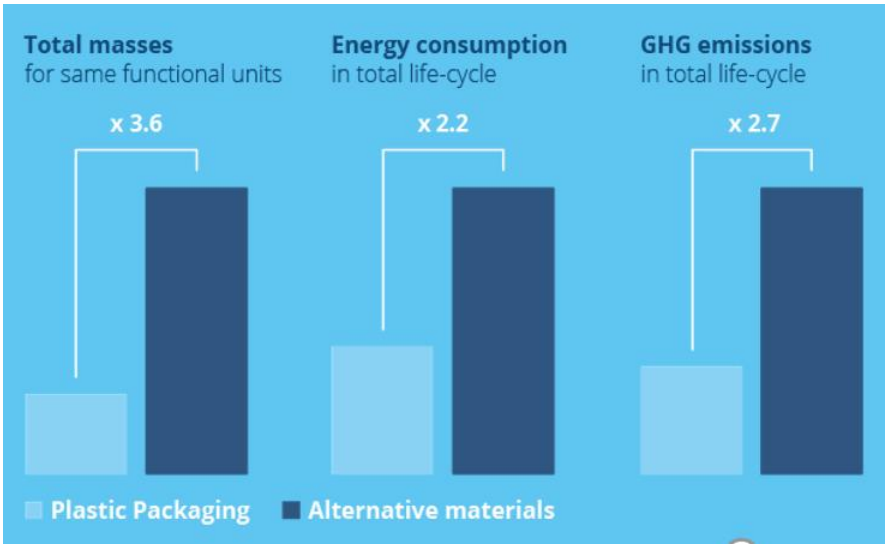
Plastic Packaging Projected Placed On The Market (tonnes)



Source: Valpak PackFlow Covid-19 Phase II, 2020

Myth 6 – Plastic packaging has the highest climate change impact when compared to alternative materials.

Various studies have concluded that alternative materials to plastics have much higher climate change impacts. In one study which examined grocery packaging applications concluded that substituting alternatives to plastics would result in an overall increase in climate change impacts of 2.7 times (Denkstatt, 2010). Further information can be found in the plastic packaging FAQs.



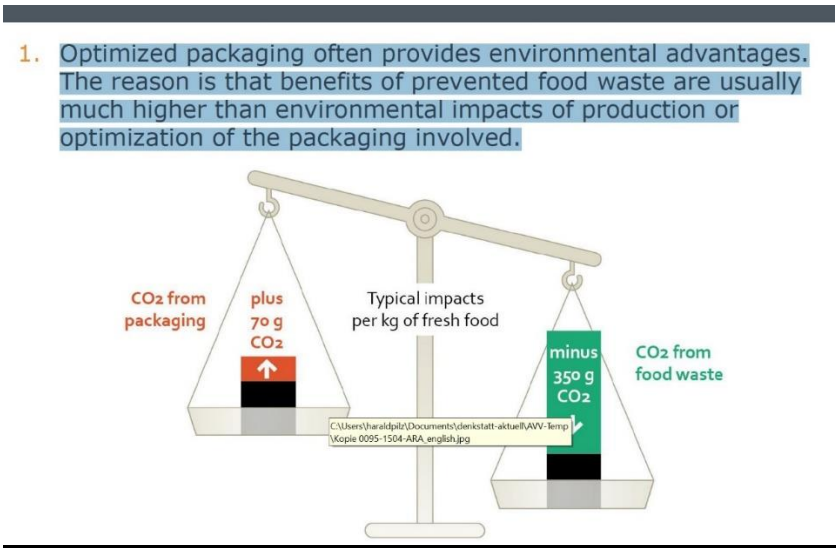
Source: Brandt and Pilz, 2010

Myth 7 – It is better to buy goods with no packaging?

Packaging plays part of the solution to prevents waste in several ways such as ensuring the food/product safety and quality all the way along the supply chain, extends shelf life, enables portion control by providing the solutions to suit consumer needs and provides consumers with the necessary information on how to use the product and store it.

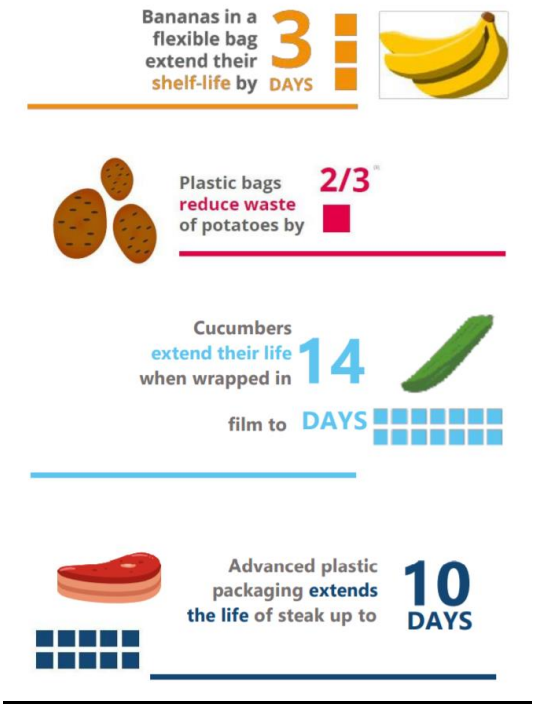
Packaging is essential to protect food in the following ways;

- ✓ Preventing damage, contamination, contact, ….
- ✓ Providing a barrier against oxygen, moisture etc.
- ✓ Optimizing humidity and temperature
- ✓ Keeping food in protective atmosphere or vacuum
- ✓ Further optimization by improved barrier layers
- ✓ Improved puncture resistance
- ✓ Inclosing components for modifying the atmosphere (for example scavenging Oxygen)
- ✓ Better sealing (Source: Denkstatt, 2015)

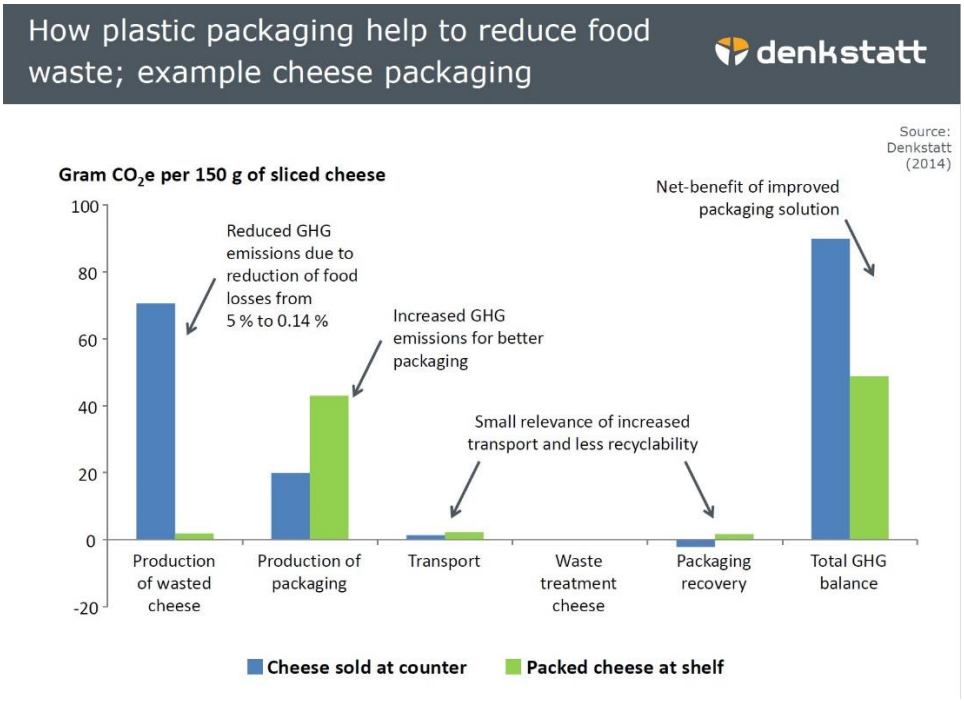


Source: Denkstatt, 2017

Food wastage has 10x the environmental impact than the packaging used to protect it. Further information can be found in the plastic packaging FAQs.



To provide an example of the environmental benefit that packaging plays in preventing food wastage and saving greenhouse gas (GHG) emissions please see the following study by Denkstatt, 2014. The study identifies that packaging cheese has a significant net-benefit of GHG emissions over a non-packaged product.



Source: Denkstatt, 2014