

True Solutions to Plastic Pollution - Listening to the Next Generation

Tidy Britain and Ocean Conservation APPG meeting - audience Q&A

How do we get all firms to buy into the changes needed. Should the change come from government legislation?

Asked by Tanbridge House School Eco Committee

Systemic change requires action and collaboration from all sectors of society, and government plays a pivotal role in ensuring businesses take responsibility for their impact on the planet. By passing laws, government can create a level playing field that means all businesses must adhere to one set of rules. They also have the power to instil key financial incentives that are proven to create change i.e. impose charges and levies on things that are bad for the planet, making them more expensive to produce and hence incentivising things that are good for the planet. However, whilst legislation creates immense impact, it can sometimes take a long time to enact, and as we are working to a very urgent timeline, we need manufacturers to move to sustainable practices now. Business responds most directly to the needs and desires of their customers, so if enough people demand change, then business will quickly adapt. We can help turn the tide by driving this public appetite for change.

Why do most people appear to not have a sense of urgency when it comes to reducing our impact on the planet?

Asked by Darlington Academy Eco-team

A very complex but important question to ask. The lack of urgency is borne out of a number of reasons from all sectors of society, from an unwillingness to cover the issue by the press and politicians, to unwillingness to move away from a fast and convenient culture by society. In addition, unless an issue negatively impacts directly on an individual, it is easy to ignore the issue or consider it to be somebody else's problem. A classic case in point being climate change. Therefore, bringing the impact of climate change, plastic pollution and biodiversity loss to life and showing how these threats impinge on people's real lived experience is critical. Three of the best ways we can tackle these issues is through government legislation, campaigns that appeal to customers to change their buying habits and through action orientated environmental education in schools that develops the knowledge, skills and values within a new generation of activists and ethical consumers.

Which are worse, hand dryers or paper towels? Should we plant more trees in polluted areas? How can we encourage people NOT to use single-use plastics?

Asked by Headington Prep Eco Council

1. [Studies have found](#) that after analysing the entire lifecycle of each, paper towels and warm air hand dryers have the highest environmental toll – generating 70% more carbon

emissions than the newest technology on the market such as cold air-driven hand dryers. In future, these cold-air dryers would also be powered by clean electricity.

2. Absolutely, trees have a remarkable range of traits that can help reduce urban air pollution. However, while trees are generally effective at reducing air pollution, it isn't as simple as the more trees you have in an urban space the better the air will be. Some trees are markedly more effective at filtering pollutants from the air than others. To make the most difference in air quality in a street or city, it has to be the right tree for the job. Read more [here](#).
3. We know that we're the most environmentally aware generation ever, however there's a huge gap between awareness and action. Driving behaviour change around single-use plastics takes a multifaceted approach using everything from legislation (simply banning some items), financial incentives for industry (to produce less) and individuals (to use less - for instance getting a 25p discount on coffee when you bring a reusable cup) to industry innovation in creating reusable packaging, facilitated by government legislation. Read more [here](#).

Do you think it is possible to create a circular economy and have all products recycled?

From Tanbridge House School Eco Committee

and

Is a circular economy really feasible? What has been holding back implementation in the past?

Emily, Port of London Authority

Ultimately, we will have to create a circular economy - as there is only so much primary resource we can dig up before we run out. Hence, achieving a circular economy is not so much an if, but a must. Central impediments to a circular economy at the moment are how cheap virgin plastic is and the sheer amount we consume. Shifting our focus upstream towards reducing the amount we produce and consume at source to foster a culture that prevent unnecessary consumption and fosters a 'reuse culture', accompanied by an investment in recycling infrastructure to create valuable recyclate material using renewable energy sources are therefore crucial. Indeed the idea is catching on, particularly in Europe, as a small, crowded, rich but resource-poor continent. The European Union has led the way with their Circular Economy package and is investing billions in the strategy. The Netherlands has pledged to go fully circular by 2050. Amsterdam, Paris, and London all also have plans. Read more [here](#).

Why don't we have 'Deposit Return' cabinets in the UK?

Asked by John and Lindsay

The government have committed to introducing a deposit return scheme for England from 2023 (Scotland will have theirs a year earlier in 2022), and once the Environment Bill is enshrined into law next year, they will consult with businesses, industry, consumers and campaigners on drawing up a detailed and effective scheme which will boost the UK's recycling rates and stem

the amount of plastic threatening our natural environments and wildlife. A [recent Keep Britain Tidy survey](#) found that drinks bottles overwhelmingly constituted the bulk volume of litter found in the country, and with extremely effective results in other countries, the introduction of a DRS is expected to make a huge impact on litter pollution in the UK.

Why don't we use our plastic waste to repair our roads?

Asked by John and Lindsay

Although initiatives like these can be part of the overall solution, focusing on end-of-life solutions can actually perpetuate the problem. By making it seem as if there is a safe, sustainable and efficient way of disposing of plastics, interventions such as this tend to take the focus off the steadily mounting plastics crisis i.e. the need to tackle unsustainable increasing plastic production at source. Plastic waste roads treat the symptoms and not the cause. There is also evidence that plastic road-making itself is a source of pollution, you can read more [here](#). But ultimately, this still represents a linear 'make-use-dispose' system. Where we do capture material for recycling should be, as far as possible, within a 'closed loop' system. In other words, any plastic bottles we produce are turned back into plastic bottles.

Why do we not research how we can 'completely demolish' plastic with, say, bacteria that eat plastic?

Asked by John and Lindsay

There is ongoing research into harnessing bacteria to demolish plastic, however there are a few problems with this approach. In order to get the benefit from plastics, they need to be durable in a range of conditions, therefore creating plastics that break down fast is a catch twenty-two situation. Like above, solutions like this do not tackle the problem at source - reducing plastic production overall and may encourage people to litter plastic if they think it will quickly break down. Further research needs to be done to assess the unknown and [potentially hazardous side effects](#) of using these enzymes in natural settings like marine environments. But ultimately, this still represents a linear make-use-dispose system. Where we do capture material for recycling should be, as far as possible, within a 'closed loop' system. In other words, any plastic bottles we produce are turned back into plastic bottles.

Asking people to recycle isn't working: what's the solution? How can we make it easier for people to be able to trust that their recycling really will go to the right place?

Asked by Jonah, St Ives Cambridgeshire

Incentivising recycling is a complex issue that will take a number of wide-reaching actions, these include: implementing extended producer responsibility legislation to ensure manufacturers only produce things that can be recycled; making recycling easier for the public through harmonising recycling rules nationwide and making information more simple and easily accessible; and investing in domestic recycling infrastructure, meaning we reduce the carbon impact of exporting waste to unknown international waste streams as well as create new green jobs in the UK. The government is proposing legislation that will require these measures to be in place by

2023. Once we have the system working better than it does now, we need to inform people what happens to their recycling making it clear where it goes and what happens to it, to demonstrate to people that recycling their waste results in tangible benefits.

Do we have any alternatives to plastic bottles? Rather than just recycling them?

Asked by Yardleys School

When reducing our plastic consumption, we must be careful that we don't simply shift our high consumption culture to using alternative materials which have an [equally detrimental impact on the planet](#). Both glass and aluminium drinks containers can have a higher carbon footprint than plastic. Instead, we need to create systems that prioritise a refill and reuse culture that tackles the root problem. The best way to avoid plastic is to use a refillable water bottle and ask for free tap water at businesses signed up to the Refill scheme or make use of refill fountains in public spaces, a number of train stations now have these.

Can we still save the world?

Asked by Headington School

It's a big goal, but absolutely! Let's be honest we don't have much of a choice. We can work to protect the environment, and even reverse degradation. We have the knowledge and ability to do so, it's now a case of converting awareness into action - both government and societal. Collaboration, good legislation, political willpower and good science and innovation are all needed! As a race, humanity is too often slow to react until problems are really slapping us in the face. Climate change is a classic example of this. However, many nations are now taking action to create momentum, and others will ultimately follow or face being left behind.

What incentives are being given to manufacturers to use alternatives?

Asked by Dee Lysaght

The Environment Bill, currently being debated in Parliament, will put in place the necessary enabling legislation to implement extended producer responsibility legislation. Extended producer responsibility, scheduled for implementation in 2023, will ensure that all manufacturers are held financially accountable for the products they put to market and the waste they produce. In other words, industry will be incentivised to try and make everything they produce recyclable. This will also be supported by the implementation of the Treasury's plastic packaging tax, which will levy a tax on products that don't contain at least 30% recycled plastic, in order to create demand and hence a market for secondary materials. Government has already banned certain plastic items such as stirrers, cotton bud sticks and plastic straws - but much more comprehensive regulations are still desperately needed.

It is great that bottles are being made more recyclable but what can be done to promote the positive behaviour of actually putting the bottles in the right place and not discarding into the environment? Also how can we promote the more positive behaviour of not purchasing non-recyclable goods?

Asked by Portsmouth Grammar School Eco Council

We can promote more recycling of drinks bottles through something called a [deposit return scheme](#). Deposit return schemes work by levying a small deposit on the purchase price of a container product which can be returned after use. Typically, these are bottles or cans. Upon returning your container to a machine in a local shop or supermarket, you get your deposit back as cash or a coupon. These schemes have been very successful in parts of Europe, with Finland, Germany and Norway achieving 92%, 98% and 92% return rates respectively. In the UK, we have found that financial incentives can significantly change consumer behaviour, notably through our 5p plastic bag charge, which has reduced usage by a remarkable 90% in major supermarkets and taken over 15 billion bags out of circulation since 2015. Powers to introduce a deposit return scheme will also be enshrined in the Environment Bill, scheduled for implementation alongside extended producer responsibility (EPR) legislation in 2023. These EPR regulations will help create a market where manufacturers only produce goods which can be recycled.

Throughout the whole pandemic, PPE has been crucial for protecting the public. However much of it is made of plastic, so what will be done to process the waste caused by PPE with as little damage to the environment as possible?

Asked by Ilford County High School

Whilst there are initiatives to recycle single-use PPE, there is not a whole lot of value that can be produced from them. The best way to tackle the scourge of littered PPE is to use reusable items where possible, such as a washable face mask, and limit single-use PPE only to industries where it is absolutely necessary. [Leading scientists have defended the safety of reusable things](#) as opposed to single-use items, as long as they are adequately cleaned.

Do we have any seabins in the waters around the UK?

Asked by Tanbridge House School Eco Committee

There are seabins in the waters around the UK, however there is a growing body of evidence casting doubt on their efficacy. Since over 80 per cent of the 12.2 million tonnes of plastic entering the marine environment every year comes from land-based sources, and the majority of it ends up on the sea floor rather than floating, efforts to rid our oceans from plastic pollution should focus on cleaning up land sources and reducing the amount produced in the first place, rather than the sea itself. You can read more [here](#).

What is the UK's responsibility for nonpoint source plastic pollution?

Asked by Hautlieu School in Jersey

Nonpoint source pollution is by its very nature a complex issue to attribute direct responsibility for. However, it can and should be tackled by the UK government through comprehensive upstream interventions, in other words, tackling issues at source. The further upstream mitigation occurs, the greater the opportunity to collect more plastic with less degradation and fragmentation, identifying sources before environmental impacts occur. For most scientists and policymakers, ocean cleanup is not economically or logistically feasible, moving the debate to upstream efforts, like zero waste strategies, improving waste recovery, and management and mitigating point and nonpoint sources of microplastic creation and loss to the environment. A number of academics and policy makers are now considering how microplastics and microfibrils that are released from clothing, tyres, agriculture and road paints can be tackled. Change will come about through legislation, economic incentives to encourage alternatives, and public awareness such as education campaigns.

Why don't all the big supermarkets (like Tesco or Sainsburys) try to ban plastic bags and use the alternatives like fibre bags or even paper bags? Plastic straws were banned so why don't we try to ban plastic bags?

Asked by Ilford County High School

Although bans on single-use items are really useful tools, careful consideration needs to be made on how we phase out things like plastic bags, specifically so that we can prevent any negative [unintended consequences alternative materials might produce](#). Paper bags may appear better than plastic but many end up only being used once and are actually heavier than plastic bags using more carbon as a result (as they are heavier to transport to store, hence more fuel is used). The goal needs to be to move away from using any type of material a small number of times, to using bags for life for as long as possible. Life cycle analysis looks at the whole life impacts of a product from design to use to disposal. Cotton and fibre bags are more carbon and water intensive to produce than standard plastic ones. However, studies have shown that if used regularly, instead of being discarded after one use, fibre bags ultimately end up being less resource intensive than single use and don't of course contribute to plastic pollution.

Are any companies looking to produce edible wrappers?

Asked by Woodfield Primary School Eco Team, Wigan

There are some manufacturers who are looking at producing edible wrappers, however a wholesale shift to using edible wrappers would take a huge societal change. Considerations also have to be made about potential hygiene issues and the sustainability of the edible materials themselves, which can sometimes have a more carbon and resource intensive production process than mainstream plastic. Our focus is ultimately better placed on creating a stronger refill culture, away from food on the go, thereby diminishing the need for single-use packaging altogether.

Can schools be a part of the solution?

Asked by Royal Rise Primary School

Absolutely! Schools are a central part of the solution. Learning about our planet, how we can change our actions, and how we can participate in the democratic process to get Parliament to act is crucial to ensuring a better future. Schools are also places where key innovations occur, like switching to plant-based lunches and better recycling facilities. Both [Keep Britain Tidy](#) and [Surfers Against Sewage](#) have educational programmes to help you on this journey. We firmly believe that students today are the environmental leaders and ethical consumers of the future.

What can we do to remove the plastic that is already in the oceans?

Asked by Royal Rise Primary School

There are [programmes of work](#) that successfully collect plastic from our oceans, however there are concerns around how much they damage wildlife in the process. Although it is important to remove plastic, it must be done in a careful manner, and with plastic packaging forecast to grow 60% by 2030, and to treble by 2050, our main focus must be on preventing future pollution. Additionally, since over 80 per cent of the 12.2 million tonnes of plastic entering the marine environment every year comes from land-based sources, and the majority of it ends up on the sea floor rather than floating, efforts to rid our oceans from plastic pollution should focus on cleaning up land sources and reducing the amount produced in the first place, rather than the sea itself. You can read more [here](#).

During lockdown do you think that there has been a reduction in plastic pollution as people may have had more time to consider their actions?

Asked by Royal Rise Primary School

Sadly, while there has been greater appreciation of nature by the British public during lockdown, this trend has not been reflected in actions around litter and plastic pollution. Worldwide, an estimated 129 billion disposable face masks and 65 billion gloves are used every month, according to a study in the journal *Environmental Science and Technology*, much of this is improperly disposed of. Results from the [Marine Conservation Society's Great British Beach Clean](#) reported that face masks and gloves were found on almost 30% of beaches cleaned by its volunteers, and more than two thirds (69%) of 'inland' litter picks found PPE items.

We've also seen a huge shift in public behaviour, resulting in an increase in littering of public spaces. In the summer, as the first national lockdown eased, we observed an increase in litter in parks and on beaches, a large percentage of which was plastic waste. Keep Britain Tidy conducted a snapshot survey in July this year to better understand what was going in parks, to which over 100 local authorities replied. Half reported that they had to pull in extra resources to deal with issues, including litter and anti-social behaviour, after the initial easing of lockdown in the summer. Of those, 81% had to spend more on clearing up litter, 79% on bin emptying and 72% on maintaining public order or enforcing lockdown rules. Furthermore, [reports show](#) that

globally, the pandemic has caused a surge in plastic production and waste, as well as causing a price war between recycled and new plastic, made by the oil industry.

While this might seem pessimistic, the good news is that there is a high level of awareness and appetite for change. The attention now needs to be on converting this awareness into action. The best way to close this gap in a comprehensive way is through government legislation.

End of Q&A, should you have any further questions, please contact
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