



In a new series on the environment, Abi Page looks at the scale of the problem facing our planet – and profession

Planet optics: *how green are we?*

I will never forget my poor husband's face when I first suggested that we start rinsing out our cat food pouches and storing them in our porch – ready to be recycled via a local Terracycle scheme. Historically, as a family, we'd been blissfully unaware of our environmental impact; our purchasing decisions and habits were often based on convenience to suit our busy lives rather than any eco attributes. So why the change now?

Climate change is a word most of us have become familiar with over the past few years, with many (including myself) now rather more ominously referring to it as a 'climate emergency'. Whether it is down to Greta Thunberg, Sir David Attenborough or the recent protests across many UK cities by Extinction Rebellion, most of us have become much more aware of the problems facing our planet.

Every day the media is full of stories discussing the human impact on our planet, be it air and sea pollution, biodiversity loss, deforestation or single use plastic. The jargon can seem confusing and some might think of it as a problem for future generations. It can be difficult to see how it relates to us personally. It can be even harder to see how such a big problem really can be improved by small, individual actions.

In this new 'Eco practice' series, we will explore the reasons for making a change to the way we treat the environment, looking at how eco-friendly the optical industry is now, and what positive steps we can take individually and collectively, to reduce our carbon footprint.

SO WHAT'S THE BIG EMERGENCY?

Carbon footprint refers to the amount of carbon dioxide (CO₂) released into the atmosphere as a result of the activities of a particular individual, organisation or community. CO₂, a greenhouse gas, is the



main cause of climate change and is produced by burning fossil fuels, intensive farming and other human activities.

In just 200 years, the amount of CO₂ in the atmosphere has increased by 30 per cent – so concentrations are now higher than at any point in the past 800,000 years, according to scientists in Hawaii¹. Atmospheric CO₂ continued its rapid rise in 2019, with the average for May peaking at 414.8 parts per million (ppm).

This was the highest seasonal peak recorded in 61 years of observations on top of Hawaii's largest volcano, and the seventh consecutive year of steep global increases in concentrations of CO₂.

The impact of this is an increase in global temperatures, which is causing ice caps to melt, sea levels to rise and disturbing the entire weather clock.

The Committee on Climate Change (CCC), an independent statutory body established under the Climate Change Act 2008, has played an important role in the UK's transition to a low carbon future. In

2019, the UK government legislated the level of the 2050 target in line with the CCC's advice. This commits the UK to reduce its greenhouse gas emissions by at least 100 per cent compared to 1990 levels (up from a previous commitment of 80 per cent).

But many would argue this isn't enough.

In March this year, United Nations General Assembly president, María Fernanda Espinosa Garcés of Ecuador, warned that we could have just 11 years left to prevent irreversible damage from climate change. Indeed, many will have seen the BBC One programme that aired in May: Climate Change: The Facts. After one of the hottest years on record, Sir David Attenborough warned: "It may sound frightening, but the scientific evidence is that if we have not taken dramatic action within the next decade, we could face irreversible damage to the natural world and the collapse of our societies."

However, there was also a message of hope, with Sir David suggesting that if dramatic action was taken over the next



Around 100,000 marine animals die each year from ingesting plastic

decade, then the world could keep temperatures from rising by more than 1.5°C this century, thereby limiting the scale of the damage. This is good news, but the dramatic action has to start now – and *everyone* needs to get involved.

PLASTIC AND WATER POLLUTION

According to researchers in America², since the 1950s around 8.3 billion tons of plastic have been produced worldwide – yet it's estimated that only nine per cent of it has been recycled. Plastic items can take up to 1,000 years to decompose – and any single use plastic that ends up in landfill only adds to the carbon emissions already produced from its original manufacture.

According to research published by Plastic Oceans UK, plastic makes up around 75 per cent of marine litter, although it's suggested that this could be up to 100 per cent in some areas³. In 2017, the United Nations reported that ingestion of plastic was killing an estimated one million marine birds and 100,000 marine animals each year⁴. Additionally, more than 90 per cent of all birds and fish are believed to have plastic particles in their stomach, as plastic breaks up into tiny pieces in the sea, which are then consumed by fish and other sea animals.

Research from Plymouth University⁵ has found that close to 700 species of marine life are facing extinction due to the increase of plastic pollution. The call for the end of single use plastics is at an all-time high with many industries and companies such as McDonald's and Ikea announcing big changes.

But in practice recently, I created a huge pile of single use plastic frame bags and

sleeves from just one delivery of frames. This begs the question: are our suppliers doing enough to address their part in the plastic problem?

The Global Risks Report 2018⁶ points out that plastic pollution is so great that micro-plastics are found in 83 per cent of tap water in the world. Chemical pollution from agriculture and industries is another problem where plants and animals are killed or affected by toxins.

HOW ECO IS OPTICS?

The manufacturing industry is responsible for hundreds of hazardous chemicals used in the production of various products. Have we addressed how *our* industry contributes to water pollution? What are our lens, frame, case and contact lens suppliers and labs doing now? And what could be improved?

We don't have a current assessment of the environmental impact of the optics industry as a whole. Each practice will differ, and the responses from the suppliers I've contacted have been vague or non-existent. Undoubtedly, there is more to do in this area.

So, I would encourage all members concerned for the future of the planet to challenge their suppliers about their environmental policies and ask the following questions:

- What are you doing to tackle the environmental crisis?
- How are you reducing your carbon footprint?
- How are you tackling the plastic problem?

I believe the optics industry needs to do

a lot more to tackle air, land and sea pollution – which all contribute to climate change. There is a clear connection between the better use of resources and direct cost savings, such as where materials are used more effectively, or assets are used for longer periods. So really, some changes should be 'no brainers'.

We all have a responsibility to encourage our patients to reuse and recycle our products and, where appropriate, we should always reglaze, repair and use recycling schemes such as the Acuvue Terracycle contact lens scheme and Vision Aid Overseas.

Manufacturers have the same responsibility to us as they do to their consumers. The power of the consumer is mighty and changes can be made by carefully choosing where or which supplier we spend our money with. Let's show our support to those who are coming on the journey with us.

HOW WE CAN HELP?

So what can we actually do? How can we make a difference when it seems like everything has such a bad impact on the climate? Firstly, try not to be overwhelmed: being greener is a journey, not a destination. We all forget our re-useable shopping bags once in a while, and not every change can be implemented all at once. Slowly, good intentions and plans will become good habits and actions.

Following the mantra in order to Reduce, Reuse, and Recycle at both home and work will give you a great starting point for a greener future. In an ideal world,



Plastic haul from just one supplier delivery

RECYCLE YOUR CONTACT LENSES AND BLISTER PACKAGING!

Every year countless contact lenses and pieces of blister packaging end up in landfill sites across the UK.

The ACUVUE® Contact Lens Recycle Programme allows us to recycle your contact lenses and blister packaging, preventing them from ending up in landfill.

Not only are you helping the environment, but the waste you recycle with us also helps to fund schools or charitable organisations.



Drop off your waste at...



Your collection leader is...



The more you recycle, the more money we raise!

Learn more at www.terracycle.co.uk

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ACUVUE® is a registered trademark of Johnson & Johnson Medical Ltd. Johnson & Johnson Medical Ltd. 2018.
All ACUVUE® Brand Contact Lenses have UV Blocking to help provide protection against transmission of harmful UV radiation to the cornea and into the eye. UV absorbing contact lenses are NOT substitutes for protective UV absorbing sunglasses such as UV absorbing goggles or sunglasses because they do not completely cover the eye and surrounding area. You should continue to use UV absorbing eyewear as directed by your optician.

Could you use the Terracycle contact lens scheme?

we would reduce what we use and produce in the first place, only replacing things when needed. Secondly, we can reuse what's already been produced –either in the

same way or in a completely different way. Finally, recycle ideally everything that's left with the aim being zero waste to landfill.

We work in an industry that's creative,

innovative, technologically advanced as well as passionate and caring. We are perfectly placed to take a proactive approach to improve our sustainability and, ultimately, the planet we live in. I would welcome an industry wide approach to an environmental strategy and pledge in the near future. Together, we can do this. We *have* to do this; the consequences of not changing are too great.

In my next article, I will look in more detail at the changes we can make in practice. If you'd like to be involved in this project, please do get in touch by emailing apage@abdolondon.org.uk

REFERENCES

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Eco calls to action

Here are some key areas that we need to address together as an industry:

In practice: work towards carbon neutral status by offsetting where needed. Aim to send zero waste to landfill by reducing, reusing and recycling.

Packaging: Some suppliers, such as Stepper, have already addressed single use plastic packaging – as well as those marketing themselves as 'eco' brands. Look at how and why suppliers are using plastic packaging.

Manufacturing waste: Tokai Optical lenses are made in Belgium and use lens waste in road surfaces. Can this type of reuse be extended?

Frames: Can more frames be made from sustainable and eco-friendly materials? Could more frames be made from recycled materials, as well as being recyclable when they're no longer required?

Dummy lenses: Are they made from sustainable materials? Can we seek an industry wide way to recycle them along

with old lenses?

Broken frames: Vision Aid Overseas sorts donations of frames with precious metals or retro/vintage value, but what about the rest? What about the masses of broken parts? How can we re-use these?

Cases: We merrily give patients new cases at every collection, but should we be encouraging our patients to only ask for a new case only when they need one? Can cases be recycled? Are they made from sustainable materials?