

While fighting Covid-19 we may be losing the war against plastic pollution

By [Dr Eunice Ubomba-Jaswa](#)

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As Covid-19 cases continue to rise in South Africa and across the world, vast quantities of plastic waste are also rising. Essential single-use plastic items that help to protect against the spread of the virus, such as masks, gloves, protective gowns and face shields, now commonly known as "Covid waste", are piling up in landfills and accelerating the global pollution crises. Additionally, an upsurge in microplastics - both primary microplastics manufactured at a small size and typically found in hygiene and sanitation products and secondary microplastics that will eventually break down from single-use "Covid plastic waste" items - is drastically reversing gains made in reducing our dependency on plastic and in turn curbing plastic pollution.



Dr Eunice Ubomba-Jaswa, research manager, Water Research Commission

Plastic Free July in 2020

Plastic Free July, which marks its tenth anniversary this year, is an annual global call to find alternatives to plastic for items we use daily, lessen plastic pollution and preserve the environment – 90% of all waste in the ocean is plastic.

Unfortunately, the Covid-19 pandemic has rather ramped up our use of disposable items as frontline healthcare workers and other workers coming into constant contact with potential Covid-19 positive persons do require protective gear that is best discarded in a safe and environmental friendly manner after use. However, the use of single-use plastic items in other facets of society as a way of curbing Covid-19 spread, such as disposable masks being worn by the public to adhere to regulations and packaging in the restaurant and food industry, needs to be rethought.

The SARS-CoV-2 virus is a respiratory virus whose primary route of spread is through the inhalation of droplets. It might be possible that persons who touch a virus contaminated object or surface and then subsequently touch their

mouth and eyes may infect themselves. However, to date, research work has only confirmed the primary route of transmission. Once the virus has contaminated either a disposable or reusable surface or item, the threat posed to human health remains the same.



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Disposable items not proven to be safer

Currently, no scientific evidence exists to show that disposable items are safer to use during the pandemic compared to reusables. In fact, some preliminary evidence shows that the SARS-CoV-2 virus might survive longer on plastic surfaces compared to other surfaces tested. Social distancing, hygienic behaviour, including washing hands correctly and frequently, avoiding touching the face with unwashed hands and cleaning and disinfecting highly used surfaces, are far more important in stemming the virus than the use of disposable items. Furthermore, knowing the virus' highly fragile lipid structure, and thus its susceptibility to soap and water, contaminated reusable items can be effectively disinfected when

using appropriate detergent, soap and disinfection products.

With relaxed lockdown regulations, more businesses in South Africa opened up in July 2020, operating under strict guidelines of sanitising, mask wearing and social distancing, and along with this a sentiment that single-use items are safer and more reliable to adhere to basic hygiene rules. As we balance the reopening of our economy with saving lives, we must also find ways to balance our use of plastic with the protection of our environment, particularly our fresh water sources which are also being impacted by plastics.



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Changing our behaviour towards plastics

To start with, we must adjust our thinking and behaviour about plastics. Just as Covid-19 is changing the way we naturally interact with each other, we also need to change our behaviour towards plastics. Despite a fourth consecutive increase of the plastic bag levy – now at 25 cents a bag – statistics show that the rising cost of a plastic bag is not a deterrent and has not resulted in effective behaviour change since its initial implementation in 2003. However, behaviour change cannot rely simply on implementing punitive measures. Society (public, industry, etc.) needs to understand why plastic waste is detrimental to our environment and our health. It is visually easy to see the harmful effects of large pieces of single-use plastics in our environment, however with smaller plastic particles such as microplastics, seeing the negative effects are more difficult, even though microplastics ingested by fish in our oceans can ultimately end up on our plate.

The Water Research Commission (WRC) is funding leading research that aims at better understanding the health and ecological implications of microplastics in our environment, specifically microplastics found in South African freshwater resources, in order to build up a solid body of evidence of the impacts of plastic on environment and human health. Similar to the multi-faceted fight against the Covid-19 pandemic and the constant reminders, consumers and corporations must be jointly part of the efforts to stem the overuse of plastics and opt for alternatives that support the environment and human health.



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Service delivery inefficiencies

When we do use plastic, we also need to ensure that it is safely and quickly disposed of. This is now critical to avoid the spread of Covid-19. The pandemic has brought to light severe service delivery inefficiencies, such as water supply and water quality, which in turn might affect the ability of communities to effectively practice hygiene recommendations such as hand-washing. Most of these same communities also do not have services and facilities to dispose of solid waste appropriately, often resulting in solid waste contaminating limited water sources.

Plastic waste in water resources must also consider the microplastics found in soaps, detergents and other cleaning products, which we are using more of during this time and which make their way into wastewater. In South Africa, where several wastewater treatment plants are not functioning optimally, these microplastics can eventually make their way into freshwater sources. In 2018 and 2019, the Department of Environment, Forestry and Fisheries undertook a review process of policies related to the management of plastic waste and continues to seek ways in which to deliver interventions that help in the reduction of recyclable waste in landfills and generally improve waste management, including holding producers responsible in some form for ensuring proper disposal and reuse of waste. With the spotlight on basic health, safety and

sanitation at household and community level to prevent the spread of Covid-19, the pandemic provides an opportunity to improve waste disposal systems that reduce both contagion (SARS-CoV-2 virus) in the short term, and pollution from an emerging contaminant such as microplastics in the long term.



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Room for home-grown solutions

Currently, many techniques for effective plastic waste disposal are time-consuming and very expensive. Though South Africa currently recycles more than many other developed countries, there is room for home-grown solutions that can provide ways to reuse plastic waste better. The recent announcement by Coca-Cola Beverages South Africa that special two-litre bottles will now be returnable, with consumers getting a discount off their next purchase, is an example of such an initiative. According to the beverage company, the bottles can be reused up to 14 times before they are recycled and made into new bottle – effectively eliminating their plastic bottles as waste and contributing to the circular plastic economy.

Recycling is one of the most important steps in establishing a truly circular economy where waste materials are converted into valuable products to be resold and reused. Altering the way we produce, consume and, importantly, discard of plastics – by channeling them to a secondary manufacturing process rather than a landfill – will keep these materials circulating and reduce waste and pollution. Waste pickers/reclaimers also play an integral role in ensuring the diversion of recyclable materials out of waste streams. As they continue to be involved in recycling activities, even during the Covid-19 pandemic, their safety is paramount in order for them to maintain their livelihoods. The South African Waste Pickers Association (SAWPA) in reference to best practice globally, such as from the Global Alliance of Waste Pickers, has come up with recommendations for waste pickers regarding coronavirus.

Creating value from waste

Several industries are also beginning to look at new ways of using waste and creating value from waste. At a time when South Africa has shed over three millions jobs in a matter of months, the inevitable increase in single-use plastic could catalyse technological and infrastructure development and the growth of new business opportunities for the waste sector which could contribute to employment creation.

Researchers believe that by 2050, there will be more plastic than fish in our oceans. Our collective behaviour as individuals, institutions and industry is integral to stemming the tide of plastic that threatens our quality of life. While we boldly and collectively fight against Covid-19 with its immediate and obvious health risks, we must not quietly create another public health catastrophe. There is still room to reverse the impact of plastic pollution, but we must act now to stop the irreversible damage to our environment, our health, and our livelihoods.

ABOUT THE AUTHOR

Dr Eunice Ubomba-Jaswa is a research manager at the Water Research Commission

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