

Virus pandemic increases litter

POLLUTION WARNING: USE OF GLOVES, MASKS, DISINFECTING WIPES COULD ADD TO WASTE

➔ **Single-use personal protective equipment could leave mark on coastlines.**

Nica Richards

The novel coronavirus pandemic has the world gripped in a hygiene frenzy as citizens scramble to purchase masks and gloves.

This has already become an issue in Hong Kong, documented by nonprofit organisation (NPO) OceansAsia.

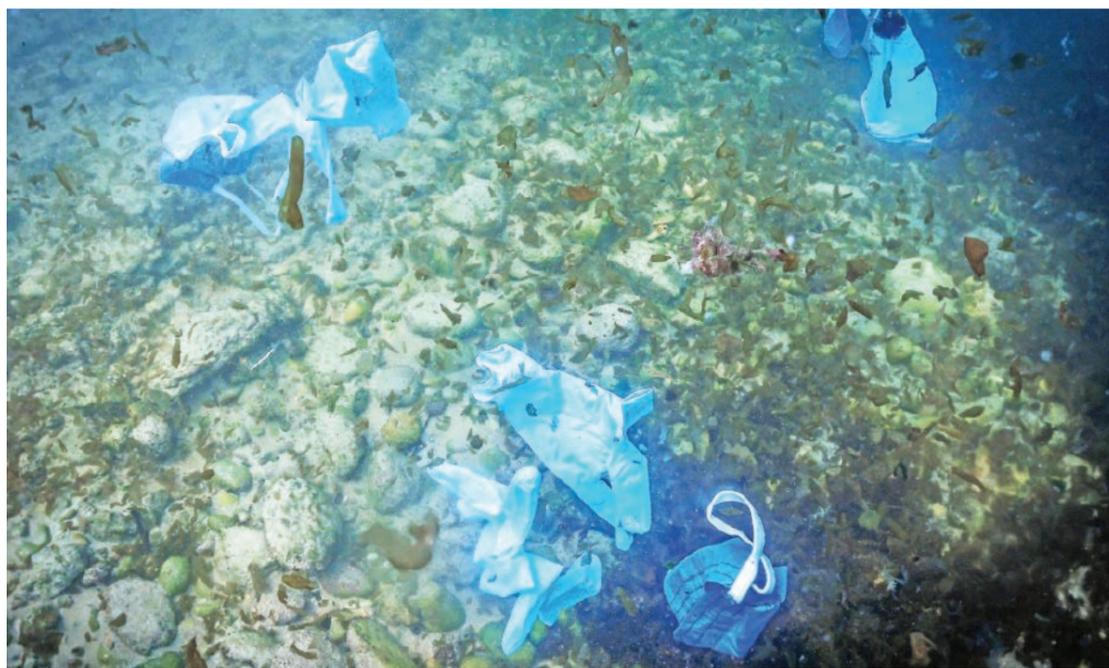
Cofounder Gary Stokes and his team recently surveyed the remote Soko's islands in Hong Kong and immediately noticed an accumulation of masks and gloves littering the uninhabited shoreline.

The NPO said in a post they were six weeks into investigating where the debris may have come from, but that the pandemic was the sole cause.

They pointed out that most of Hong Kong's population of over 7.4 million suddenly began wearing masks, sometimes more than one a day, which caused the surge of pollution.

This may not be the only beach battling to curb litter associated with the pandemic and Hong Kong is not the only city where masks and gloves are being worn.

Detroit Free Press recently reported that gloves, masks and disinfecting wipes have begun



CONTAMINATED. Face masks and gloves float above the seabed of the Mediterranean, off the coast of the Lebanese city of Batroun, during the coronavirus pandemic recently. Picture: AFP

littering the parking lots of supermarkets, with patrons reportedly discarding products on the pavement as they finish shopping.

Due to lockdown restrictions, it is difficult to confirm an increase in personal protective equipment (PPE) along South Africa's coastlines.

But Sustainable Seas Trust executive director Stacey Webb said it was possible an increase in PPE litter would be observed, should the pandemic become severe.

She added that due to Africa being in the beginning stages of the pandemic, it was not too late to prevent a potential mass

pollution situation by raising awareness among citizens and organisations.

United Nations Environment Programme director Cecilia Kinuthia-Njenga said one noticeable item increasingly littering coastlines is the blue hand cleaning cloth dispensed in shopping centres to disinfect trolley handles.

PlasticsSA has reported an increase of blue cloths in Plettenberg Bay, Mthatha, Hermanus and Capricorn Park.

"We could, in future, probably expect more PPE products as the usage as high nationally during the lockdown period," Kinuth-

ia-Njenga explained.

Fortunately, lockdown has meant a possible decline in fast food litter such as single-use coffee cups and takeaway containers, but because no clean-ups are taking place, accurate data cannot be provided.

According to Kinuthia-Njenga, latex gloves, made from natural rubber, typically biodegrade within 24 months, faster than other glove types such as nitrile glove, made from a form of synthetic rubber called nitrile butadiene. Nitrile can take decades to hundreds of years to biodegrade in landfill.

Webb said that because gloves

and masks were considered hazardous medical waste due to the highly contagious virus, they must be disposed of according to health department guidelines.

Unfortunately, this means there is no sustainable way to dispose of masks and gloves.

Health department guidelines state that utility gloves should be cleaned with soap and water and decontaminated with 0.5% hypochlorite solution, and that single-use gloves should be disposed of in a bin with a lid and disposed of as infectious waste.

However, lockdown restrictions prevent residents from accessing infectious waste disposal sites.

Kinuthia-Njenga suggested the possible use of crematoriums or furnaces to destroy gloves and masks as an interim arrangement.

She added that public-private partnerships could potentially help residents dispose of gloves and waste by organising for waste to be taken to recycling sites, but emphasised that the uncontrolled dumping and burning of gloves and masks was likely to increase the spread of Covid-19, and should not be practiced.

PPE litter has long-term detrimental environmental effects as well. Webb warned that not only would masks and gloves be consumed by animals, causing health problems, the gradual breaking down of masks and gloves would contribute to increasing microplastics, which to cause health risks as toxin poisons accumulate in human and animal tissue.

— news@citizen.co.za

Battle against Covid-19 compels scientists to work together

Salome Maswime, Collet Dandara and Sudesh Sivarasu

Amid the rising number of deaths from Covid-19, political leadership, health systems and scientific prowess is being tested locally and internationally. The pandemic provides an opportunity for innovation and new scientific discoveries.

For example, the emergence of cases in Africa inspire African-based studies to tap into the diverse genetic background of Africans for important clues in the identification of biomarkers of coronavirus infection.

However, for global scientific solutions to come from Africa, a number of prerequisites will need to be met.

The past two decades have been characterised by efforts to reduce the global burden of disease by providing universal access to healthcare for underserved and vulnerable populations. There have been parallel efforts to strengthen science, skills and infrastructure in Africa.

But a response to a fast-emerg-



MASKED. Lab technicians test samples for Covid-19 in Juba, South Sudan which reported its first coronavirus case yesterday. Picture: AFP

ing, highly infectious agent like Covid-19 demands a whole lot more. It requires strong collaboration, the use of new technologies and above all, fast-tracking of research.

There has never been a more compelling time for African scientists to work together towards a common goal. An integrated approach is all the more imperative because any country that is left behind could be the next

source of infection.

A crisis like Covid-19 demands professional barriers be broken. This would facilitate a united approach by clinicians, scientists (both life and human sciences), biomedical engineers and public health specialists. Practically, this would entail assembling teams that work together, in the first instance, towards disaster management. In the second it would involve teams working on

solutions that take into account the special circumstances of Africa – and each country.

These would be focused on learning what has worked and not worked in the parts of the world that were affected first and providing innovative ways forward for African countries.

Collaboration is needed on another front, too: technology.

The spread of the pandemic has resulted in an urgent need for a range of medical supplies. These range from personal protective equipment – face shields, surgical masks, diagnostic swabs, ventilator components and reusable N95 respirators. There is currently an international shortage of N95 respirators as well as ventilators. African countries need to create their own.

The pandemic presents a good opportunity to use new technologies. For example, with the advancement of 3D printing technologies, these critical supplies could be made on-site as required. Several universities in South Africa have started using 3D printing to make masks.

This crisis also presents an

opportunity to access huge amounts of data from patients infected with Covid-19. These patients can participate in trials or their biological samples could be used in studies to advance science and medicine.

And research should be fast-tracked. Some changes should be made to facilitate this. One such change is that institutional and national ethics review boards should be allowed to waive some of the requirements for informed consent in very particular instances.

On top of this, strategic funds should be made available to support research that's critical to countries and the continent.

— The Conversation

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