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"This is our next problem": Cleaning up from the COVID-19 response

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The purpose of this discussion is to highlight the essential role that solid waste management must play in a humanitarian response towards disasters, in particular the ongoing Covid-19 pandemic. We highlight a number of potential avenues for scholarly investigation into the waste impacts of our response to Covid-19, but in particular, briefly unpacks the relationship between disasters, consumption and disposability as one potential research topic. The discussion is intended to start a conversation that is, at the moment, critically relevant, and to contribute to a more inclusive, and less normatively Western waste management studies discourse.

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The Spanish island of Mallorca has been severely impacted by the Covid-19/Coronavirus pandemic which, within the first few months of 2020, had spread to nearly every corner of the globe. The human toll has been immense. Although the infection rate in the Balearic Islands, the region that contains Mallorca, is lower than the national average, Spain has become a hotspot for the disease, and as of April 30th 2020, had passed 213,000 total cases, and 24,500 deaths (Statista, 2020). Coronavirus Updates Mallorca is an English language public Facebook group created to share virus updates and information amongst the local expatriate community. Featuring dozens of new posts daily, most content focuses on changes in lockdown regulations, information from the government about economic relief, as well as posts designed lift spirits during a difficult time. On March 23rd however, Ben Morris, a resident of Mallorca, made a post that went viral, which, within a week, had been shared over 13,000 times. A collage of photos which had appeared to have been taken by Morris at a local beach shows dozens of single-use face masks washing ashore: a part of the collective detritus of our efforts to combat the Covid-19 pandemic (see Fig. 1). Further investigation revealed, however, that Morris had merely cropped and shared the photos, which were not from Mallorca at all, but had rather been captured in late February in the Soko Island’s near Hong Kong (Boyle, 2020; OceansAsia, 2020). Nonetheless, the post, its rapid spread, and its confused provenance, are indicative of the power of the image itself, as well as the power of social media to spread information, and misinformation, during a time of crisis.

Within the media and on social media there has been considerable discussion of the positive environmental benefits of the pandemic and the resulting slowdown in global growth and production.1 Many of these have proven to be fabrications, such as the images of dolphins frolicking in the canals of Venice, but others, like improved air quality in major cities2 and the global decrease in greenhouse gas emissions are both noticeable and verifiable. The other indelible images of this pandemic, have been less eco-friendly, however. With looming uncertainty, and restrictions on movement, the pandemic in many countries has also been characterised by consumption: the stockpiling of supplies, hoarding, and in some instances, panic buying. These more extreme reactions have also been accompanied by more subtle consumption changes: switching to single-use products for hygiene and convenience, using disposable wipes for disinfecting surfaces, carrying small bottles of hand sanitiser, and of course the masks, which may well continue to wash up on shores, either in Mallorca or Hong Kong, long after the pandemic recedes.

The Covid-19 pandemic is a disaster on a global scale, and in addition to its human impact, it will produce an immense amount of waste that will need to be managed sustainably. But this reflection is not necessarily groundbreaking. When sharing the pictures of face masks washed ashore on the beach, Morris titled his post ‘this is our next problem’, but this is not new. Our responses to disasters, both man-made and natural, have been a significant source of waste

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and have been producing evocative images for decades, from mountains of discarded water bottles in post-hurricane Haiti to piles of cardboard packaging waste outside on the margins of a refugee camp in Bangladesh. Moreover, disasters, and the management of disaster waste, have been a well-investigated topic within waste management studies discourses. However, this body of literature is predominantly concerned with the waste directly caused by disasters (i.e. building rubble, plant material, etc.). Specific foci of investigation have centered on strategies for managing disaster waste (see (Amato et al., 2020; de Magalhães et al., 2018; Domingo and Luo, 2017; Dugar et al., 2020; Gabrielli et al., 2018; Karunasena and Amaratunga, 2016; Karunasena et al., 2009) including possible options for reuse or recycling (see (Brown and Milke, 2016; Regattieri et al., 2018; Tabata et al., 2019), the modelling of potential impacts and systems reliability (Cheng et al., 2018; Trivedi et al., 2015), and the restoration of waste management systems post-disaster (see (Petersen, 2004; Ulusan and Ergun, 2018)). However, what is less understood are the waste impacts of the human or societal responses to these disasters, such as disaster relief, socio-economic restrictions, or shifts in consumption patterns. When waste, stemming from the humanitarian or socio-cultural responses to disasters is discussed, the conversations have not occurred within waste management studies literature, but rather in disaster relief and logistics literature, and then, only tangentially. Moreover, despite substantial scholarly attention within waste management studies towards how to sustainably and hygienically manage infectious and other potentially hazardous medical waste, there has been generally little accounting for disaster scenarios, while the literature on emergency medical disaster relief pays, at best, tokenist lip service to waste management issues.  

Although the current Covid-19 pandemic makes this topic feel timely, its urgency is more broadly rooted in climate change. As global temperatures continue to rise, the number of catastrophic climactic events are expected to increase. Moreover, there is a strong correlation between population density and the risk of pandemic, and with current population growth trends, the risk of human-made disasters (both climactic and disease), especially within the Global South, is expected to increase exponentially (Gholipour, 2013). As such, the waste impact of these disasters is likely to significantly increase, as well as the waste footprint of our reactions to them. In these circumstances, the current silence within waste management discourses on this topic is unacceptable. The purpose of this discussion is to draw attention to this knowledge gap and to highlight the absolutely essential role that solid waste management must play in a humanitarian response, now, towards Covid-19, and to other, future disasters. A number of potential avenues for scholarly investigation on the waste impacts on our response to Covid-19 stand out, including: the sound management of infectious waste in disaster scenarios,  

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3 There is also another precedent within academia for thinking about the effects of disasters, and even pandemics on wastage. Archaeologists primarily gather their data by studying waste, and have conducted research on historical events, such as the Black Plague, through examinations of waste (see (Ratke, 2002; Viney, 2014)).

4 One exception from the waste management studies literature is Zhang et al. (2016) who offer guidelines for characterisation of medical waste as disaster relief sites.
and in low-resource contexts in particular; the impacts of consumption shifts and movement restrictions on waste pickers and other informal workers; the impacts of movement restrictions on waste management service delivery; and, what we will attempt to unpack briefly here, the relationship between disasters, consumption and disposability. This is far from an exhaustive list, but our purpose is to start a conversation that is, at the moment, critically relevant, and sorely lacking within waste management studies discourses.

The Covid-19 pandemic has intensified a widespread practice of single-use products which has been escalating over the past three decades, a trend that has received some scholarly attention in spaces such as Discard Studies, (see, for instance, Hawkins’ (2019) excellent commentary on the evolution of disposability). Fears of contamination, social distancing regulations, and stay-at-home orders have contributed to a visible resurgence in consumer preference for single-use products for both hygienic reasons, as well as convenience. Largely, this has been in response to state-issued instructions and guidelines for disaster preparedness, so we must be cautious how we characterise and contextualise individual choice. Nonetheless, as Kaufman (2020) has observed, the Covid-19 pandemic has served as an opportunity for the plastics industry to restore a legitimacy to single-use plastic products that had eroded over the past decade. How can we quantify the waste impact of this consumption and disposal, as well its potential impacts on municipal waste management systems? Moreover, how many of these consumption patterns will become ingrained, and how do we push the reset button to continue to move towards sustainability and zero waste? These shifts may have unforeseen consequences which resonate long after the pandemic recedes. For example, lockdown conditions in the Global North have corresponded to a dramatic increase in consumers flushing thick, fabric-like wipes down home toilets (Kaur, 2020). These products cause serious problems for sewer systems that have not been designed for the volume and quantity of this novel material.5 Coping with the resulting blockages puts a burden on municipal governments already operating under severe strain. Moreover, the implications for non-sewered sanitation across much of the Global South are even less understood.

On March 31, 2020 The Guardian newspaper published an article titled “‘We can’t go back to normal’: how will coronavirus change the world?” In the piece the author, Peter C. Baker (2020), speculates that the pandemic could be an opportunity to reshape the world—either positively, by tackling structural inequality, or negatively, by exacerbating existing injustices. Within waste management academic discourse, however, we should not seek a return to normal, because despite substantive progress in some industrialised nations over the past decades, ‘normal’ has not worked for much of the world, and the Global South, in particular. Going back to normal involves returning to the systemic inequalities inherent within the waste management sector globally. Rather, this is an opportunity for us all to reflect on how we can contribute to a more inclusive, and less normatively Western waste management studies discourse. We recognise that many of the issues raised are not new. However, we do hope this discussion will spur a heightened awareness of this emerging issue within other disciplines, help to foster interdisciplinary conversation and coordination between relevant sectors, and shine a light on the glaring research gaps that we, as researchers, must address.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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5 Notwithstanding that often the workers expected to clear these blockages often come from vulnerable groups, and are exposing themselves to extra risk by responding during the pandemic.
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