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Editorial

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This issue of *Waste and Resource Management* has an interesting juxtaposition: a briefing article on the increasing emphasis on reuse in the UK at the top of the waste hierarchy and diving down to the bottom through an analysis of the stability of waste in dump sites in central India.

Historically in all societies reuse of items and materials has been necessitated by the difficulty and labour cost of replacement of those assets. However, as the cost of labour relative to materials has increased so has the tendency to discard and replace with new items, assisted by the ease of disposal. The resurgence of reuse in the UK that Tavri (2021) assesses has been driven by people power, not from a top-down perspective, but was also reactive because it occurred from the bottom upwards, with employees and the wider general public concerned about the wastage of perfectly good products that are surplus to organisations' needs. This resurgence Tavri refers to dates to the period immediately after the global financial crisis of 2008. The development of reuse from the bottom up is common to all new initiatives that are ultimately translated into government policy and legislation.

It was no coincidence then that people were concerned about their own finances and made adjustments to their behaviour, especially about their food purchasing habits. The outstanding success of the Waste Resources Action Programme (WRAP) 'Love Food, Hate Waste' campaign, which started in 2008, in reducing food waste by citizens was reinforced by the financial crisis (Cooper, 2020). Tavri refers not only to the emphasis on surplus food redistribution by food suppliers but also other businesses that have now placed increasing emphasis on reuse of goods and materials in their sectors.

Naveen *et al*. (2021) used a range of geophysical methods to examine two landfills in Bengaluru, Karnataka state and Bhandewadi in the south-east of the city of Nagpur, India mainly to assess the robustness of using the multichannel analysis of surface waves (MASW) technique and thereby evaluate sites' stability. One of the problems of determining the stability of site slopes is the composition of the waste, particularly when sites such as these can be accessed by a number of transport operators. Therefore, with more waste being put into these sites the angle of the slopes becomes steeper. Parihar *et al*. (2017) were able to conduct a survey of the composition of municipal solid waste (MSW) for Bhopal, India and while the fraction of plastic waste in MSW was rising the greatest proportion of waste was biodegradable food wastes. However, the wastes being dumped in the two sites under investigation by Naveen *et al*. were more diverse and only sketchily estimated.

This assessment of potential site slope stability is becoming increasingly important because there have been incidents around the world of dump sites and landfill slopes collapsing with multiple deaths and injuries to people. The causes have been numerous and include earth tremors and extreme weather events, such as localised heavy rainfall. The problem will continue to escalate as the space used for dump sites and, hopefully in the future, engineered landfills decreases as a result of pressure on land for alternative, more productive uses and the better utilisation of wastes. In addition, dump sites cause multiple environmental issues, the principal one being water contamination of both aquifers and often surface waters as well.

There have been two contrasting examples of landfill slope failures in the Shenzhen area of southern Guandong province, China. One occurred in an engineered landfill for MSW in 2008 after heavy rainfall (Peng *et al*., 2016) but the problem was remedied with emergency pumping. However, the second was an illegal dump of construction and demolition waste over 60 m high which slipped in December 2015 causing over 70 deaths and the destruction of homes and industrial buildings.

The various geophysical assessment techniques used by Naveen *et al*. showed that the in the Mavallipura site the shear-wave velocity was low at a depth of 30 m and not much greater in the Bhandewadi site, with both sites being classified as presenting as equivalent to soft soil. This was not unexpected because even at depth in the sites and a considerable time after deposition there is continuing degradation of the deposited waste taking place.

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