

Editorial

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Waste prevention has been the top of the waste hierarchy for decades – in the past with rather limited effects. Since the beginning of EU waste statistics, the total amount of generated waste has increased significantly, closely linked to economic growth rates: every additional Euro earned has led to an additional amount of waste. The EU lead indicator for waste prevention – total waste generation excluding major mineral waste per capita – shows that on average every EU citizen causes more than 1.8 tonnes of waste every year, causing enormous environmental burdens as well as economic costs (Eurostat, 2019).

Many policymakers as well as scholars have raised doubts if this link between economic development and waste generation can effectively be addressed, not to speak of an actual minimisation of waste generation. Nevertheless, more and more stakeholders in policy as well as industry see the potentials and benefits of waste minimisation that – in contrast to traditional end-of-pipe approaches – often require cross-cutting approaches bringing together different steps of the value chain. Taking into account the existing outlooks on future waste generation – for example, by the International Resource Panel (2019) – it is self-evident that such innovative concepts will be necessary in order to deal with a foreseeable doubling of waste amounts.

This themed issue of *Waste and Resource Management*, therefore, covers different aspects of successful waste minimisation: Lippitt *et al.* (2019) focus on prevention of construction and demolition waste, taking the example of High Speed 2 (HS2), the new backbone of Britain's rail network and one of Europe's biggest construction project. Bains *et al.* (2019) have analysed how China, as an example of a rapidly urbanising society, has developed measures to minimise waste in the construction sector. Almeida *et al.* (2019) analyse the specific waste stream from the ceramic and marble industry that leads to significant environmental pollution problems. And finally, Schinkel (2019) reviews policy instruments and for effective food waste prevention; one of the very few waste streams with globally accepted quantified prevention targets.

All the papers highlight that waste generation is not unavoidable; successful prevention measures clearly can make a difference. At the same time there is also the joint conclusion that much more research, conceptual as well empirical, will be needed in order to minimise waste in the most effective ways – in terms of environmental impacts – as well as efficient ways – in terms of necessary financial efforts. Especially compared to traditional waste management approaches, the knowledge base on prevention is often still too weak in order to justify significant investments in less waste-intensive patterns of production or consumption. Against this background this themed issue aims to motivate and inspire researchers in different fields – from engineering as well as economics or social sciences – to initiate new research projects and, of course, to submit new papers on this increasingly important topic.

REFERENCES

- Almeida TF, Leite FHG, Faria RT Jr and Holanda JNF (2019) Using industrial solid wastes to produce calcium silicate. *Proceedings of the Institution of Civil Engineers – Waste and Resource Management* **172(3)**: 86–91, <https://doi.org/10.1680/jwarm.18.00018>.
- Bains M, Hongyi Y and Jialong C (2019) International policy perspectives on construction waste minimisation and recycling. *Proceedings of the Institution of Civil Engineers – Waste and Resource Management* **172(3)**: 76–85, <https://doi.org/10.1680/jwarm.18.00020>.
- Eurostat (2019) *Waste Statistics*. Eurostat, European Commission, Luxembourg. See https://ec.europa.eu/eurostat/statistics-explained/index.php/Waste_statistics#Waste_generation_excluding_major_mineral_wastes (accessed 28/08/2019).
- International Resource Panel (2019) *Global Resources Outlook 2019: Natural Resources for the Future We Want*. United Nations Environment Programme, Nairobi, Kenya. See <https://www.resourcepanel.org/reports/global-resources-outlook> (accessed 21/08/2019).
- Lippitt P, Dunwoody A and Charlson A (2019) Planning for waste minimisation and resource efficiency in HS2. *Proceedings of the Institution of Civil Engineers – Waste and Resource Management* **172(3)**: 65–75, <https://doi.org/10.1680/jwarm.18.00017>.
- Schinkel J (2019) Review of policy instruments and recommendations for effective food waste prevention. *Proceedings of the Institution of Civil Engineers – Waste and Resource Management* **172(3)**: 92–101, <https://doi.org/10.1680/jwarm.18.00022>.