

# Newsletter #13

December 2021 - Zero Waste



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## Intro: Zero Waste - A Necessary Ambition

The concept of “zero-waste” has gained increasingly attention over the past years. But what does zero waste refer to? It started as the concept of designing out waste and achieving a world with no waste at all, where everything would be put back into the system and kept in closed loops. While this is the ideal, many experts agree that unfortunately, we won't be able to achieve this vision in the near future. However, we can work towards it through ‘inspiring the reshaping of resource supply chains (products or by-product materials)<sup>1</sup> away from outdated linear models. This is

desperately needed as ‘half of global CO2 emissions were from materials extracted and processed in 2019<sup>2</sup>.

In order to achieve this, we need to promote active communication between upstream and downstream actors in the value chain to influence the design of products with reusability and recyclability in mind.

If creating waste is unavoidable, conservation of resources needs to be given preferred status over energy

recovery and landfilling. To divert as much resources as possible from landfills, we need to promote the interrelated 5Rs: Rethink, Refuse, Reduce, Reuse and Recycle. These also refer back to product design (Rethink!).

The following articles show that adopting a zero-waste approach, as in “promoting the 5Rs and diverting as much waste as possible from final disposal” is possible and does come with additional benefits for cities and their inhabitants.

## Reimagining cities towards zero waste- a roadmap to resource recovery

By Swati Singh Sambyal, UN-Habitat India

COVID-19 has highlighted the need for our cities to have effective solid waste management systems in place that are resource efficient, circular, and inclusive. By shifting to zero waste strategies, municipalities can immediately begin reducing the costs of their waste management and device steps that focus on rethinking and reinventing waste management.

But how can cities adopt zero waste concepts?

**1. Start with making segregation at source mandatory not optional.** To mainstream waste segregation and to focus on waste reduction at source, price incentives can be explored as a key driver of behavior. For instance, citizens pay more user-fee if they generate more waste, or in Mangaluru, India, households that segregate and compost their waste receive a 50 per cent concession on property tax.

These efforts must be complemented with continuous advocacy and awareness.

**2. Set up effective collection and transportation systems to support segregation, end to end, right from collection, processing until disposal.** Increasing collection effectiveness and efficiency will reduce contamination of resources (especially dry waste) and can also help in saving resources such as fuel (e.g. through route optimization). The introduction of a Management Information System can enhance accountability and transparency as well as generate relevant data.

**3. Build systems for maximum resource recovery in cities.** Change the infrastructure to support maximum resource recovery with a phase out plan from being heavily dependent on disposal infrastructure such as landfills. If feasible, create decentralized infrastructure, to reduce costs on transportation. Encourage

treatment of organic waste at source (e.g. home composting) and create a market for the products from organic waste treatment. For dry recyclables, ensure further sorting and recovery by integrating the informal sector. Additionally, impose an adequate landfill/incineration tax per tonne of waste, reflecting the real costs of disposal.



<sup>1</sup> Awasthi, A. K., Cheela, V. S., D'Adamo, I., Iacovidou, E., Islam, M. R., Johnson, M., Li, J. (2021, January 08). Zero waste approach towards a sustainable waste management. Available online at: <https://www.sciencedirect.com/science/article/pii/S2666916121000013>

<sup>2</sup> Circular Economy Michael Murphy-Al-Hamdou Dorsouma - Available online at: <https://www.weforum.org/projects/circular-economy>



4. Integrate the informal sector as they are the real resource managers in our cities. Waste pickers can be integrated directly into waste collection, with a right over recyclables incorporated in the city's bylaws. Municipalities can also support the establishment of waste picker cooperatives or SMEs. Lastly, the informal sector needs to be provided with relevant training.

5. Raise and deliver continuously awareness and social engineering. Local resident committees can play a key role in ensuring citizen commitment towards waste segregation. Also, educating waste collectors is important to ensure separate collection of waste. Media can play an important role in creating awareness.

6. Integrate city specific solid waste management bylaws with the zero-waste strategy, incorporating various steps that will help in transforming the city into a zero-waste city. The regulations must be supported by evidence and fit the local context. Cities need to assess their solid waste management system, for example with the Waste Wise Cities Tool (WaCT) to prepare effective implementable strategies for zero waste cities.

## Zero Waste Cities in Europe



*This article was contributed by Jack McQuibban, Cities Programme Coordinator at Zero Waste Europe.*

Zero waste is a vision and approach that provides solutions to the environmental crises we face today. [Today there are nearly 450 Zero Waste Cities across 10 European countries](#) that have committed to becoming zero waste, implementing community-centered waste prevention strategies that redesign our relationship with nature and resources.

The [Zero Waste Cities model](#) is based upon an effective door-to-door (kerbside) separate collection system of recyclable materials, most importantly organics, which leads to more quantity and better quality of recyclable materials being given back to the market (or soil enhancer from composting). But recognising that recycling alone is not enough, Zero Waste

Cities implement locally tailored waste prevention policies, such as enforcing only reusable items are used in public events/spaces, as well as installing economic incentives that support residents and businesses to reduce their waste generation even further.

Whilst zero waste may have seemed fanciful or wishful thinking only a decade ago, now it is a set of tangible and impactful policies that communities are applying to help them reduce their impact on the environment, protect the health of local citizens, facilitate the growth of a local economy that is resilient and sustainable, all whilst saving costs in traditional waste management.





## The circular economy as a tool for the sustainable development of Ljubljana, Slovenia



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This article was contributed by Jack McQuibban, Cities Programme Coordinator at Zero Waste Europe.

In Ljubljana we are convinced that the shift from linear to circular economy has a significant impact not only on production but also on the whole social order and our mentality. We inform, educate and encourage all our public employees to behave sustainably, in a circular manner and take green decisions. At the same time, we are building interdisciplinary value chains, having in mind economic, social and environmental benefits. We are introducing responsible management of all resources (from financial to human) and strengthening innovation and competitiveness in all areas of the city's management.

Ljubljana understands the circular economy as a tool for the sustainable development of the city, in line with the UN Sustainable Development Goals. The City tries to manage all its resources by maintaining their value for as long as possible. Reuse and sharing, repair, restore and recycle is a way that not only allows us to save, but at the same time enables us to do something good for

ourselves, the environment and society.

A systemic, holistic, strategic approach is the one Ljubljana has been following for more than 14 years now and, with this approach, the City is repeatedly confirming that by adopting long-term sustainable and circular solutions with the involvement of citizens, we and our environment will come out as winners.



(c) City of Ljubljana

## Get to know our Affiliates

In this section we give our Waste Wise Cities Affiliates the possibility to introduce themselves.

### Clean up Nepal

"Clean up Nepal is a non-profit, non-governmental organization established in 2014. Clean up Nepal focuses on a people-centric solution approach by connecting, educating, and empowering communities and stakeholders to improve solid waste management system in Nepal.

Apart from solid waste management, Clean up Nepal also focuses in the issue such as air pollution, policy and advocacy, and research.

Some of our key projects are the following:

### Zero waste at school

A school program empowering our children to become a responsible citizen of tomorrow



Zero Waste at Schools is an initiative of Clean up Nepal with a vision to reduce the amount of waste produced and disposed by the schools and gradually take it to zero level in the long run. The program also aims for behavioral change among

the school administration, teachers, staff and students resulting in reduction of waste generated through implementation of the 3Rs - Reduce, Reuse and Recycle concept.

### Nepal Waste Map

Enabling data-driven solutions and stakeholder synergy through the smart waste dashboard and mobile application.



Nepal Waste Map is a digital waste management and data collection system which includes a comprehensive web-based dashboard and mobile application. It is currently implemented in several

municipalities in Nepal. The technology platform allows cities and municipalities to undertake powerful analysis of waste-related data; provide waste collection and management information; and

enable citizens to report waste dumping, burning, and irregular waste collection services.



## E-waste Producer Responsibility Organization of Nigeria (EPRON)



"Our Journey to Zero Waste in the EEE Industry in Nigeria: EPRON was incorporated with a mission to provide an industry led, regulatory compliant platform employing circular economy approaches for the environmentally sound management of e-waste in Nigeria. The organization seeks to utilize the Extended Producer Responsibility (EPR) principle as an invaluable tool to achieve zero waste in the electrical/electronic sector as specified by the EPR Guideline.

Critical to the achievement of the organization's goal is the need for a sound regulatory and structural framework. In that regard, since June 2019, EPRON has partnered with the UN Environment and the National Environmental Standards and Regulations Enforcement Agency (NESREA) to implement the Global Environment Facility (GEF) funded "Circular Economy Approaches for the Electronics Sector in Nigeria" project. It has achieved the:

- development of a software to manage Producers data and product information centrally and confidentially;
- development of a levy structure for a financially self-sustaining EPR system for six product categories; and
- set up of e-waste collection system comprising of 30 formal e-waste collection channels and the formalization of about 300 informal collectors for take back of e-waste in Lagos State."
- development of detailed Guidance and Implementation Plan for enforcing the National EPR Legislation;





5Rs



## Let's Do It Foundation (LDIF)



"Let's Do It Foundation is based in Estonia, established in 2011 to support the growth of a civic movement of nation-wide cleanup actions. After calling to life World Cleanup Day – the biggest civic action against waste – we put together a guideline 'the Keep It Clean Plan' which points out the most relevant intervention points for any stakeholder on the road towards zero waste.

We work globally with two strategic goals to

- drive societal change towards resource and waste; and
- to support the adoption and scaling of innovative zero waste solutions.

Our educational programs for NGOs and municipalities are particularly prioritising learning and teaching methods that support these goals. In promotion and support of circular economy and zero

waste solutions the general principles are always stakeholder engagement and ambition to action.

All our programs are also built around the concepts of circular economy and zero waste. We work in the EU and developing countries with:

- civil society organisations aspiring to start sustainable waste management initiatives;
- social enterprises developing zero waste and circular economy approach in

collaboration with local and/or national governments;

- foundations and corporations interested in investing in livelihoods, women empowerment and circular waste management solutions, using tech for good;

- local authorities willing to go beyond awareness raising.

For more info: <https://letsdoitfoundation.org/>



## Waste Wise Cities Affiliates

Do you want to:

- Support Waste Wise Cities and improve waste management in cities around the world?
- Be an official partner of Waste Wise Cities and UN-Habitat?
- Show up on the Waste Wise Cities website?
- Implement the Waste Wise Cities Tool?
- Read about your activities in this newsletter?
- Do much more?

Then [contact us](#) and become a Waste Wise Cities Affiliate! Together we can become Waste Wise!

## Waste Wise Cities Tool (WaCT)

You have forgotten what the Waste Wise Cities Tool is? No worries, you can find all information on our [website](#). [Here](#) you find out which cities have already submitted data collected with the WaCT and as you can see from the article below, more data is becoming available.

### WaCT Updates

This year the WaCT was applied in different cities around the world, supported by different partners as already showcased in past newsletters.

UNEP Coordination Body on the Seas of East Asia (COBSEA) is one of those partners who supported the WaCT application in six cities in Southeast Asia (Cambodia, Malaysia, Thailand, and Vietnam) through the SEA Circular project, funded by the Swedish Government. Despite difficulties in implementing the field work due to strict COVID-19 restrictions in the region, WaCT has been applied in Hoi An (Vietnam), Kep and Sihanoukville (Cambodia), Seremban (Malaysia) and Chonburi (Thailand). Overall

findings from the region are that the waste collection rate is relatively high (except Kep with only 58%), but challenges are the management of disposal facilities and increasing waste recovery through source separation.

Through the African Clean Cities Platform, funded by the Government of Japan, WaCT has been applied in Bukavu (DRC), Harare (Zimbabwe) and Sousse (Tunisia). Except for Sousse which has a high waste collection rate of 90%, lower waste collection rates can be observed: in Bukavu only 7% of generated municipal solid waste is collected and in Harare 27%. Bukavu is located in the eastern Democratic Republic of Congo, a region suffering from prolonged armed conflict. Harare is the capital city of Zimbabwe,

currently facing hyperinflation which hinders the financial flow for waste collection. Sousse on the other hand, a Mediterranean city with a big tourism industry has a very high waste generation rate of 1.18 kg/person/day. An awareness raising campaign to reduce the per capita waste generation could help Sousse to reduce the expenditure related to municipal solid waste management.



## Waste Wise Cities & African Clean Cities Platform Updates

### Official Side Event at COP26 puts open burning of waste on the international climate agenda

Climate emissions from open burning of waste are double that of aviation but rarely acknowledged, while health impacts are deadly: it is estimated that open burning of waste, especially in urban areas, is contributing to more than a million premature deaths per year. However, so far it has been mostly ignored during climate debates.

The event highlighted that urgent action is needed now. Examples given by speakers include the need for consideration of black carbon by the Intergovernmental Panel for Climate Change (IPCC) and an internationally agreed assessment methodology, enhancing waste collection and segregation at source as well as waste recovery, improving management of

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