



# Introducing Zero Waste Europe – the main principles

*Introductory guide*

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# Introduction

Zero Waste Europe is a movement bringing together European municipalities, linking international non-profit distributing organisations and local Zero waste groups with the aim of phasing out waste as a way to improve sustainability, economic resilience and social cohesion.

Zero Waste Europe is the European branch of the [Global Alliance for Incinerator Alternatives \(GAIA\)](#) and is a member of the [Zero Waste International Alliance \(ZwIA\)](#).

Zero waste means designing and managing products and processes to reduce the volume and toxicity of waste materials, conserve and recover all resources, and not burn or bury them.

## Main principles

### Culture Change

Current European linear production, consumption and disposal patterns are based on the myth that we live in a world with infinite resources. Over the last decades Europeans have been living with an increasing ecological debt with the rest of the world; importing almost 4 times more materials than we export. As the European Sustainable Development Strategy points out, a change in paradigm is necessary.

But this change of paradigm has to go beyond the current goal of turning Europe into a recycling society; it needs to embrace the reduction of material and energy use in order to transform it into a zero waste society.

### Engaging the communities

Community education and participation is indispensable for the success of any zero waste plan. Citizens should be invited to invent and adopt waste free practices and participate actively in the design of resource management systems which work towards waste reduction. Public education campaigns to encourage public participation should be undertaken, and need to be well resourced and sustained over time.

### Infrastructure change

The production system and the waste management infrastructure in Europe must be designed to reflect the following priorities:

#### 1. Waste prevention

Waste prevention should be implemented in local and sectoral plans. The Waste Framework Directive gives the mandate to member states to define Waste Prevention Plans. Prevention targets are necessary to trigger action at national level.

*Industrial responsibility* is key in creating green jobs and designing waste out of the system by:

- designing long-lasting, easily maintainable and repairable products;
- reducing packaging and redesigning those products that cannot be safely composted, reused or recycled.

- reusing parts and material coming from discarded products and material in line with a circular economy where every “waste” output of one process becomes an input for another so that the utility of the material is maximised.

*Education and training* of professionals, policy makers and citizens is vital to bring about the paradigm shift needed and to progress the phase out of waste.

## 2. Separate collection

To maintain the utility of materials source separation of at least reusable products and components, various recyclable materials, food and garden waste, and residual waste is required.

Zero waste municipalities in Europe are showing that separate collection can achieve recycling rates of 80% to 90%. As a result, in these municipalities residual municipal waste is less than 100 kg per person per year.

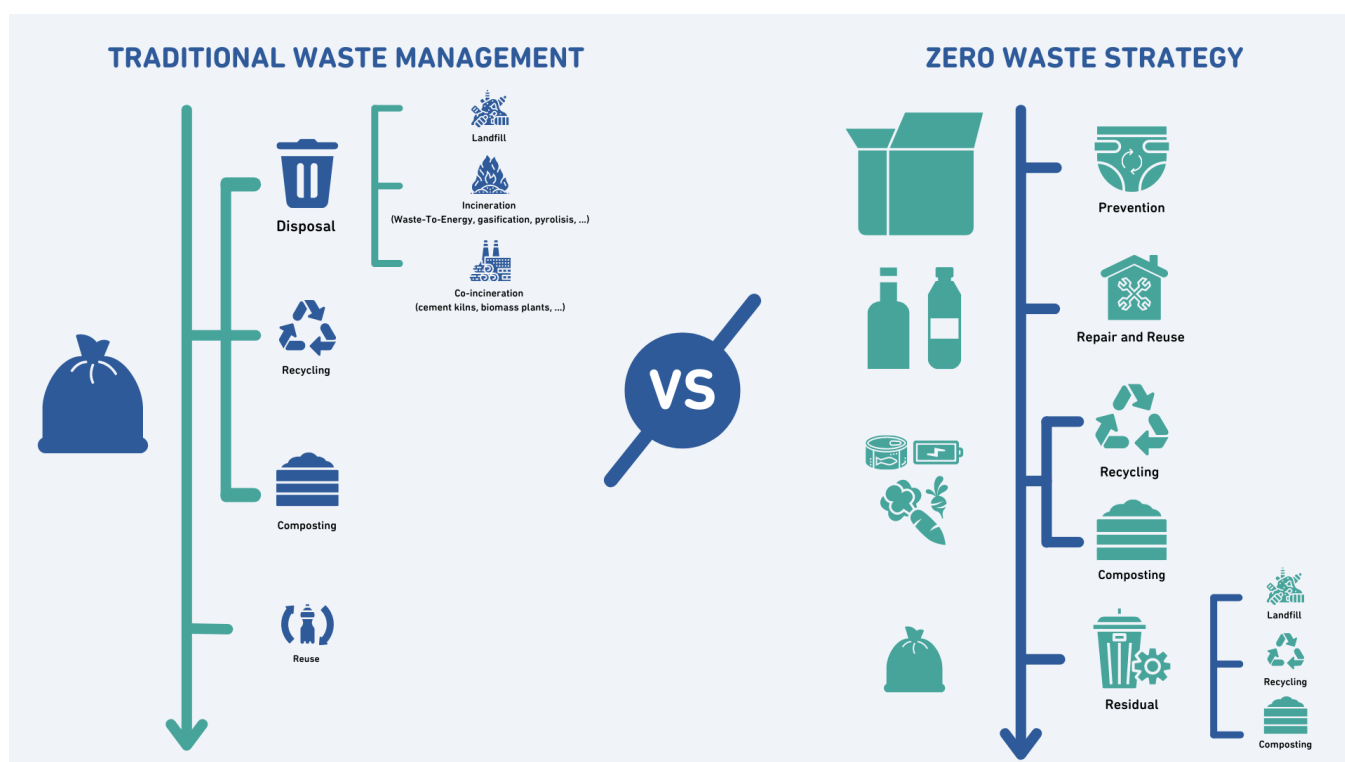


Figure 1 - Traditional waste management *versus* a zero waste strategy

*Kerbside collection* should be promoted to prevent any increase in waste and to ensure clean separation of materials at source.

*Price incentives* should be implemented as a key driver for behavior change. Excessive generation of waste should be penalised.

Kerbside collection should be complemented with *local reuse and recycling centres* (“Civic Amenity Sites”, “Recyclinghoefe”, “Déchèteries”, “Piattaforme ecologiche”, ...) that enable households and businesses to safely deliver and separate reusable items, recyclables as well as hazardous waste.

Regarding potentially reusable items, the “civic amenity sites” should, where possible, partner with *local reuse centres* run by social enterprises, where the primary aim of the organisation is the reintegration of disadvantaged groups back into the labour market. The reuse sector has significant socio-economic value and employment potential as well as positive environmental impacts.

## Energy and waste

Zero waste has an important impact on the management of energy flows in the economy. In the life cycle of most products the most energy intensive moments are in the extraction, production and use phase; hence from an energy point of view Zero waste reduces emissions associated to extraction and production thanks to feeding most nutrients and resources back into the natural cycle -soils- or technical cycle - reuse and recycling - . The emissions associated with the use phase are reduced with better product design and eco-innovation.

Therefore, zero waste offers big potential in energy savings and preservation of embodied energy. Life Cycle Analysis studies provide evidence that the magnitude of saved energy through reuse or recycling largely outperforms the energy which may be obtained through incineration (be it conventional or non-conventional).

As far as energy generation is concerned, zero waste supports systems that operate at biological temperature and pressure, such as anaerobic digestion to produce biogas followed by composting of digestate in order to maximise benefits of turning organic matter back into soils.

### 3. Reduction of residual waste

The small fraction of waste that is not reusable, recyclable, or compostable should be reduced as much as possible and kept very visible to continuously drive efforts to phase it out. Work should be done at the front-end to design it out of the system, notably through reinforced Extended Producer Responsibility (EPR).

Residual waste should be analysed in screening facilities so that kerbside schemes and reduction programmes can be further implemented, and non-recoverable products can be redesigned or removed from the market.

No new disposal infrastructure such as landfills or incinerators should be built and these should be progressively phased out as prevention and recycling rates increase.

Adaptability is vital in zero waste, therefore contracts and waste plans should not inhibit increased recycling by creating lock-in situations.

With due consideration for the lack of adaptability of incineration (be it conventional, be it non-conventional) new capacity for thermal treatment must be avoided, and existing sites should be progressively phased out.

A 'bridge' solution for residual waste while local schemes increase reuse, separate collection, recycling and composting, and decrease waste amounts is to allow only a *small and ever-decreasing amount* of stabilised residual waste to be safely landfilled.

In order to minimise reliance on landfilling more quickly, the mass, volume (and impact) loss through biological stabilisation should be complemented by further material recovery from residual waste. This is proven to be practicable and in increasingly performing where kerbside programmes have been started.

## Conclusion

Creating a low-carbon, resource efficient, resilient and socially inclusive economy which respects the diversity of ecosystems and increases social cohesion is one of the main challenges facing Europe today.

A zero waste strategy is an essential precondition of this enterprise, and amongst other things, will:

- Provide thousands of extra jobs;
  - Help close the material loop;
  - Reduce European dependence on imports;
  - Bring nutrients back to the soils;
  - Reduce the environmental impact associated with waste disposal;
  - Drive innovation in product design;
  - Last but not least, involve citizens in designing a better Europe.
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For more information, please visit:

- [www.zerowasteurope.eu](http://www.zerowasteurope.eu)
- Zero Waste Europe's Twitter (@zerowasteurope)
- Zero Waste Europe's Facebook (@ZeroWasteEurope)

or contact [hello@zerowasteurope.eu](mailto:hello@zerowasteurope.eu).

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Zero Waste Europe (ZWE) is the European network of communities, local leaders, experts, and change agents working towards the elimination of waste in our society. We advocate for sustainable systems and the redesign of our relationship with resources, to accelerate a just transition towards zero waste for the benefit of people and the planet.