



# Creating regional opportunities through landfill rehabilitation

Sustainable Waste Management in a Circular Economy

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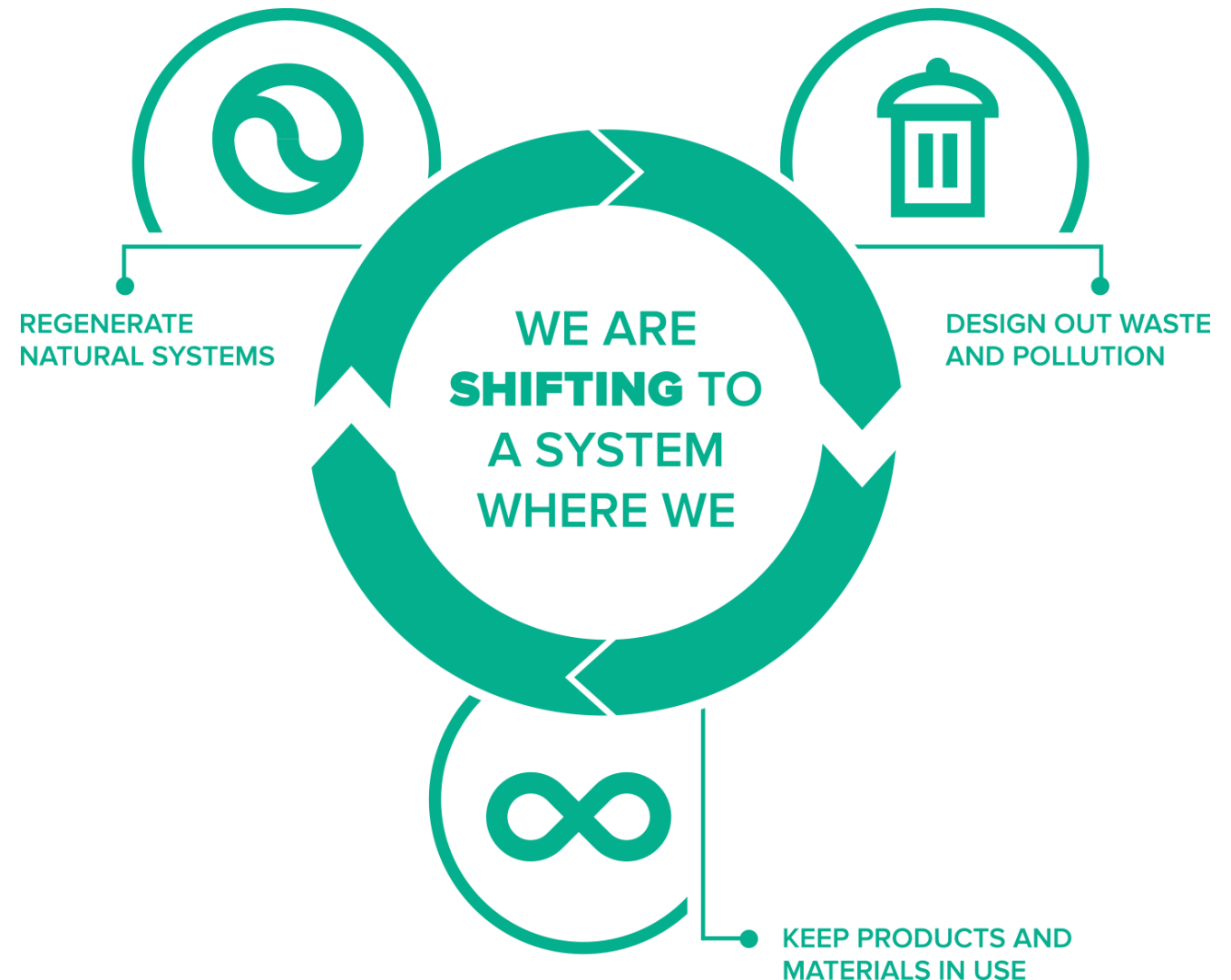


European Union | European Regional Development Fund



# The Circular Economy

Maintaining the value of products, materials and resources for as long as possible by returning them into the product cycle at the end of their use, while minimising the generation of waste.

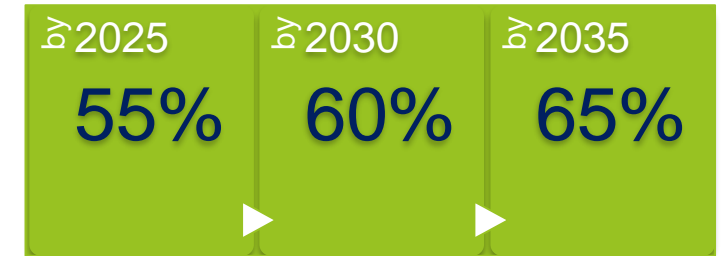




# Circular economy action plan

## December 2015: European Commission adopted an ambitious Circular Economy Package:

- Clear targets for waste reduction and recycling
- The Waste Framework Directive (2008/98/EC)
- The Landfilling Directive (1999/31/EC)
- The Packaging Waste Directive (94/62/EC)
- The Directives on end-of-life vehicles (2000/53/EC), on batteries and accumulators and waste batteries and accumulators (2006/66/EC), and on waste electrical and electronic equipment (2012/19/EU)
- EU Action Plan to stimulate Europe's transition towards a circular economy boosting competitiveness, economic growth and job creation



**March 2019: European Commission issued a Comprehensive report on implementation of Circular Economy Action Plan and reported fulfilment of its 54 actions**



# The European Green Deal

## December 2019: Commitment to tackling climate and environment-related challenges

- Sustainable product policy to reduce waste
- Reducing and reusing materials and packaging before recycling
- Transition in resource-intensive sectors
- The EU should stop exporting its waste outside of the EU

## Roadmap 2020 – A key year for waste management

- Circular Economy Action Plan, March 2020
- Proposal of legislative waste reforms, from 2020
- EU Biodiversity Strategy for 2020, March 2020
- Proposal on a ‘European Climate Law’ enshrining 2050 climate neutrality objective, March 2020 ...

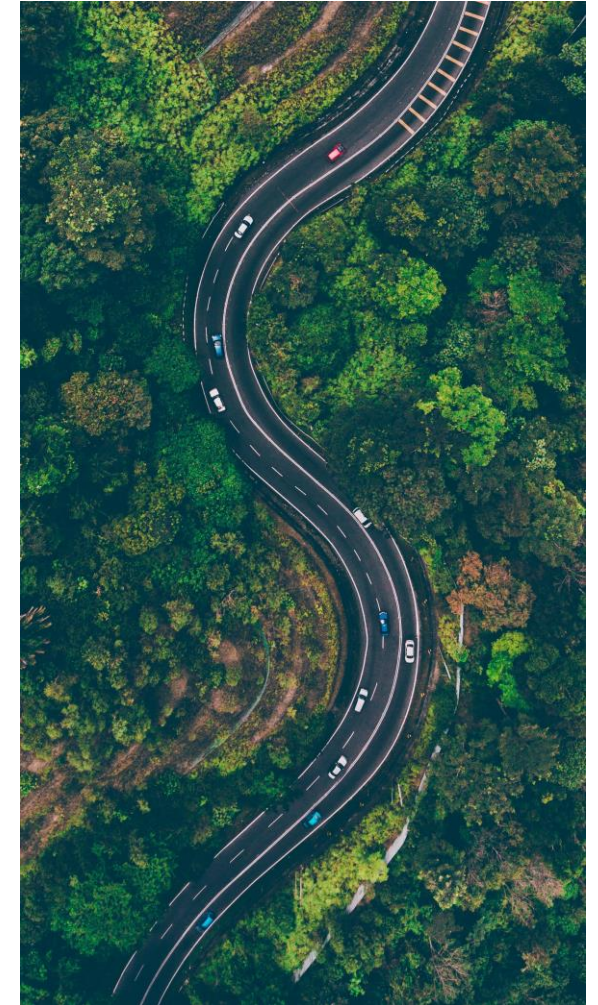


Image Source: Deva Darshan by pexels.com

# The Circular Economy

## The technical and biological cycles

### OUTLINE OF A CIRCULAR ECONOMY

#### PRINCIPLE

## 1

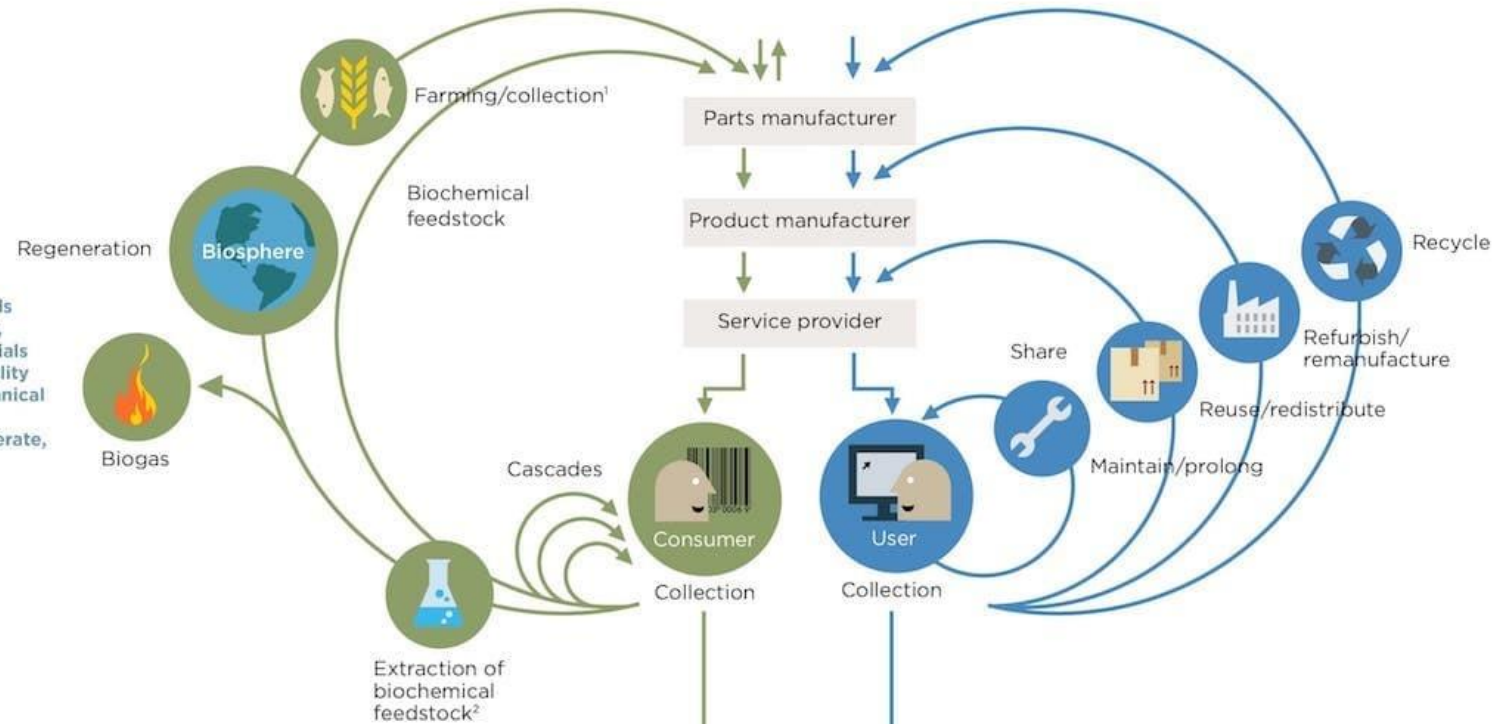
Preserve and enhance natural capital by controlling finite stocks and balancing renewable resource flows  
 ReSOLVE levers: regenerate, virtualise, exchange



#### PRINCIPLE

## 2

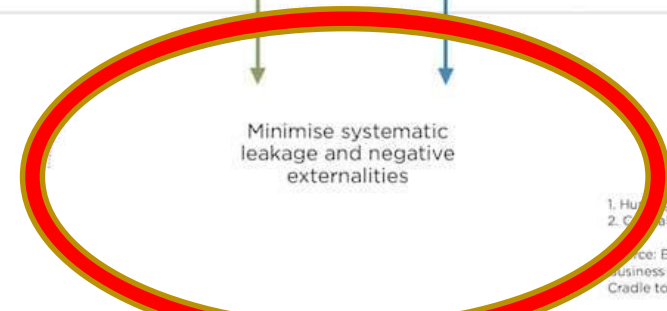
Optimise resource yields by circulating products, components and materials in use at the highest utility at all times in both technical and biological cycles  
 ReSOLVE levers: regenerate, share, optimise, loop



#### PRINCIPLE

## 3

Foster system effectiveness by revealing and designing out negative externalities  
 All ReSOLVE levers



Minimise systematic leakage and negative externalities

1. Hunting and fishing  
 2. Cows  
 Source: Ellen MacArthur Foundation, SUN, and McKinsey Center for Business and Environment; Drawing from Braungart & McDonough, Cradle to Cradle (C2C).

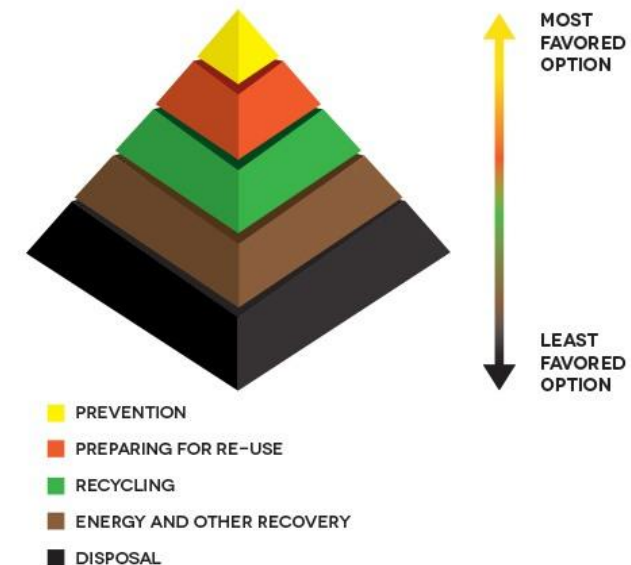


# Landfilling in the European waste management hierarchy

- Landfilling is the least preferable option
- If landfilling, comply with the stringent technical requirements of the Landfill Directive 1999/31/EC:
- Reduce possible negative effects on surface water, groundwater, soil, air

## Municipal Solid Waste Treatment, 2016

- Recycling: 30%
- Composting: 17%
- Incineration: 27%
- Landfilling: 25%





# Amended Landfill Directive - 2018

## Member States are required to ensure

- Significant reduction of waste disposal
- Recovery of economically valuable waste materials
- No landfilling of waste suitable for recycling or other recovery (as of 2030)
- Reduction to 10% or less of the total amount of MSW generated (by 2035\*)
- Major progress and investment in the collection, sorting, and recycling of waste



\*Member States that used landfills to dispose of more than 60% of their municipal waste in 2013 will be allowed to postpone the respective deadlines by five years.





# Interreg Europe Projects



Developing, integrating and improving relevant policy instruments, while increasing subsidies through operational programmes (OPs) for Landfill Management projects



European regions collaborating towards the improvement of the HCH (Lindane) contaminated sites.



Supporting wide and effective application of nanoremediation for contaminated soil and water.



# COCOON Good Practice Handbook

**Compilation of good practices for safe and effective management of old landfills (pre-1999), new landfills (compliant 1999 Landfill Directive) and future landfills waste.**

- Landfill Management practices
- Waste reduction
- Landfill mining
- Landfills and circular economy
- Integration of landfills into urban landscape
- Financing and economic options for landfill management and operations

[COCOON good practices](#)



[Handbook available here](#)



# Thank you!

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