Assessing the effectiveness of European waste management policies within circular economy under the EU Green Deal

SEIS and the environmental dimension of the SDGs – webinar series
Webinar 3 - Waste Management Indicators and Policies
The great acceleration
Three main planetary crisis

- Urgent action needed
- Irreversibilities
- Tipping points
- Interconnected

IPCC report on global warming of 1.5°C
IPBES global report on biodiversity and ecosystem services
International Resource Panel global outlook 2019
The time for a new paradigm

High cost of marginal efficiency gains, and risk of stranded assets

High carbon economy

Low carbon economy

Investments in future

Lock-in
The European Green Deal – a comprehensive response
Resource down
Productivity up

More waste
Better managed

Far from circular
Downcycling prevails

Design for circularity
Design for repair

Lack of targets

High resource use, high value, high impact

Externalities
Other barriers

Deficient monitoring
Circular Economy Action Plan (2020)

- Focus on product policy
- More solid waste prevention
- A key-product value chain approach
- Waste management continues at the centre
- Enhance monitoring/indicators
EEA priorities on CE

**Green industry**
- IED Review, PRTR Review
- Sevilla process, BAT-AEPs

**Consumption and circular economy**
- Plastics
- Textiles
- Electronics
- Buildings
- Food

**Key value chains**
- Food
- Waste

**Circular business models**

**Waste**
- Waste prevention
- Waste management
- Waste as a resource

**Raw materials**
- Resource efficiency
- International Resource Panel
- Cooperation JRC

**Monitoring CE**
- Bellagio process
- 8th EAP
- EEA Indicator Set

**Minimise**
- Extraction and import of natural resources, including energy carriers
- Incineration
- Landfill
Policy question: achieve waste prevention
- Decoupling from economic growth
- Account for population growth
Waste recycling (EEA)

**Policy question:**
- Recycling targets per waste stream
- Levels of recycling compared with generation
- Progress over time

**Policy question:**
- Municipal waste recycling targets
- Individual country performance
- Change over certain period
Diversion of waste from landfill (EEA)

Policy question:
• Overall reduction of landfilling
• Which waste streams drive change?
• Progress over time

Policy question:
• Individual country performance
• Change over certain period
• Progress towards EU landfill target

Total waste excl. major mineral wastes

Municipal waste

Click to add text
How can indicators help?

• Monitor progress towards targets/policy objectives
• Assess trends and design new policy instruments
• Background for assessments
• Identify data gaps
# Other Eurostat indicators to complete the picture

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<td>Waste Statistics Regulation</td>
<td>Sustainable Development indicators Resource efficiency indicators Circular economy indicators</td>
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<tr>
<td>Management of waste excluding major mineral wastes (pilot data)</td>
<td>Waste Statistics Regulation; COMEXT (or national import/export data)</td>
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<td>Material prices for recyclates</td>
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<td>Municipal waste generation &amp; treatment method, by treatment method</td>
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<td>Recycling rate of e-waste</td>
<td>Data collected under WEEE Directive 2012/19/EU</td>
<td>Resource efficiency indicators Circular economy indicators</td>
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Monitoring effectiveness of waste prevention

- **Waste intensity:** waste generation per unit GDP
- Only 7 countries show waste grows faster than GDP
- The rest show relative decoupling
Monitoring effectiveness of waste prevention

- Overall relative decoupling
- No absolute decoupling (waste closely follows GDP)
- Relative decoupling not necessarily attributed to prevention
- e.g. documented increase in tertiary sector means less economic activity in waste intensive sectors
Assessing municipal waste performance

Assessment elements in the upcoming EEA assessment on municipal waste in the Western Balkan countries

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European Environment Agency
New EU waste targets and ‘Early warning’ mechanism

Overview of new targets

Purpose: 3 years before the target date
• Identify countries at risk to not meet the targets
• Identify best practice
• Policy recommendations for improvement

Targets are set in the 2018 revised
• Waste Framework Directive
• Landfill Directive
• Packaging and Packaging Waste Directive

European Environment Agency
### Key factors influencing target achievement

| Current situation and past trends | • Distance to the target  
| • Past trends |
|---|---|
| Legal instruments | • Timely transposition of targets into national law  
| • Clear responsibilities for meeting objectives and targets, enforcement mechanisms, fines for non-action  
| • Waste Management Plans define the implementation of the new targets |
| Economic instruments | • Taxes or bans for landfilling of residual waste or biodegradable waste  
| • Pay-as-you-throw or similar systems in place, giving incentives for separate collection |
| Separate collection systems | • Convenience and accessibility of separate collection systems  
| • Quality management system and national standards for compost and digestate |
### Key factors influencing target achievement

**Extended Producer Responsibility schemes**
- Existence and functioning of Extended Producer Responsibility
- Fees designed to incentivize design for recycling in EPR schemes
- Deposit-return schemes for certain waste streams, e.g. bottles and cans

**Treatment capacity**
- Enough capacity for bio-waste treatment
- Capacity for residual waste treatment

**Data quality**
- Methods to collect data
- Quality checking
- Data verification process
Waste from electrical and electronic equipment

Reducing loss of resources from waste management is key to strengthening the circular economy in Europe

https://www.eea.europa.eu/publications/reducing-loss-of-resources-from

E-waste contains precious metals and several critical raw materials such as gold, silver, antimony, beryllium, cobalt, neodymium and indium. A higher recycling rate of these materials would reduce their supply risk.

E-waste also contains several hazardous materials and chemicals such as halogenated compounds, radioactive substances, heavy metals and other metals that pose environmental and health risks if not managed adequately.

Source: EEA/ETC-WISE
Bio-waste: opportunities and challenges

Collecting bio-waste separately:

- Reduces methane emissions from landfills
- Anaerobic digestion generates renewable energy
- Composting is cheaper than incineration
- Compost = fertiliser and soil improver

Unit = kg/person

Construction and demolition waste and CE

Waste generation and management influenced by interventions during

1. Raw material sourcing
2. Building design
3. Construction of buildings
4. Use of the building
5. Demolition/End-of-Life

Plastic waste exports out of the EU

- Plastic waste exports **dramatically fall** in 2018
- Alternative **destinations** identified
- Opportunity for the EU to make use of plastic **waste as a resource** in a circular economy