The EU Circular Economy vision: a powerful force for climate action

Caroline Lambert, Delegation of the EU to Australia
July 2018
## Timeline

**July 2014**  
Outgoing European Commission tables *Towards zero waste* proposals

**Dec. 2014**  
Incoming European Commission withdraws waste proposals

**Dec. 2015**  
European Commission tables *Circular Economy package* (inc. waste proposals). 54 measures

**Jan. 2018**  
European Commission tables *An EU Strategy for Plastics in a Circular Economy*

**April 2018**  
Waste proposals legislated

**May 2018**  
European Commission tables single plastic bans / restriction measures

**June 2018**  
85% measures put forward, Member States want European Commission to accelerate transition!

**Nov. 2018**  
European Commission to table low carbon vision to 2050
Resources context for the European Union

... a security of supply / price stability concern

European Union (EU-28)

Total trade EU-28 to ROW
In 2004: 455 million tonnes
In 2014: 640 million tonnes

EU-28 exports (2014)
- Biomass
- Manufactures (finished manufactured products)
- Fuels and mining products (fossil energy, metal ores and non-metallic minerals)

EU-28 imports (2014)
- Biomass
- Manufactures (finished manufactured products)
- Fuels and mining products (fossil energy, metal ores and non-metallic minerals)

Rest of the world (ROW)

Total trade ROW to EU-28
In 2004: 1664 million tonnes
In 2014: 1534 million tonnes

Source: http://ec.europa.eu/eurostat/data/database
A planet living on borrowed resources

- Last year's global footprint: 1.7 Earths

- "Once in the history of humanity resources": zinc, tin, uranium, copper, iridium, natural rubber, phosphorus, scandium, tantalum, vanadium etc.

- Global population boom: +50% food, +45% energy, +30% more water needed by 2030, same for all materials.
It's time to kick on with the transformation of our economy. Every new proposal from our Action Plan takes us a step closer to ending the 'take, make, throw-away' culture.

First Vice-President Timmermans

The Circular Economy is an important element to modernise the European economy.

Vice-President Katainen

A more Circular Economy curbs pollution. We can make this trend global. At the UN Environment Assembly countries & regions, manufacturers & suppliers are identifying new opportunities for a pollution free world.

Karmenu Vella, European Commissioner for Environment, Maritime Affairs and Fisheries

#CircularEconomy
From a Linear Economy...

- Natural Resources
- Take
- Make
- Dispose
- Waste Waste
...to a Circular Economy
Impact assessment promises

**Climate**: 450-600 million tonnes less emissions/year in the EU, over 1% global emissions.

**Economics**. By 2030, €1 trillion not sent abroad and + 7% GDP. Waste management system: €30 billion savings over 2015-2035. Single plastic measures: € 22 billion damage avoided by 2030, includes 600 € million beach cleaning coasts/year.

**Industry/business**. EU manufacturing firms savings of € 600 billion on raw materials (equivalent to 8% of annual turnover)

**Employment**. 170 000 direct jobs in waste management sectors by 2035. 3 million extra jobs potential across sectors by 2035. Local jobs at all skills levels.
Emissions context for the EU

- Industrial emissions = from producing materials: 25% of total emissions by 2050
- Roadmap updated soon, EP asks for carbon neutrality by 2050
- We do not want to loose industrial jobs!
Only 4 materials account for 3/4 of industry emissions: steel, aluminium, cement and plastics.

Only 2 sectors, car/mobility and buildings account for 50% of materials emissions.

Source: "Material Economics", May 2018
Materials recycling cuts CO2 emissions significantly

... and Europe is a treasure trove of recyclable materials

Source: "Material Economics", May 2018
Circular economy can cut EU materials emissions by 56% by 2050

A. Materials recirculation. By 2050, 75% of steel, 50% of aluminium, and 56% of plastics needs could be met by already produced material available in the EU.

B. Design and process material efficiency: reduced loss during production, advanced techniques, reducing over-specification.

C. New circular business models in mobility and buildings, notably through sharing.

Many other benefits: reduced geopolitical risks, local jobs, lower pollution, and reduced water use.

Source: "Material Economics", May 2018
The role of supply and demand side in reducing EU industrial emissions

Source: "Material Economics", May 2018
Key strategy on demand side
move to tipping point where recycling is economically viable driven by inherent material value

Steelm: higher collection of scrap; higher quality scrap (copper contamination!) through better dismantling and design.

Plastics: ensure easier recycling between different types and cleaner recyclates, recycling industry must move to large-scale. Focus on packaging, building, automotive.

Aluminium: better dismantling and design. "Closed loops" to avoid alloys mixing.
Key action areas
Priority sectors so far

- Biomass & Bio-based Products
- Plastics
- Construction & Demolition
- Food Waste
- Critical Raw Materials
Production

Objectives

Design
• boost circular product design

Processes
• innovative and efficient production processes

Key actions

• Review **EU Ecodesign directive**. To include requirements on reparability, durability, upgradeability and recyclability, identification of certain substances.

• **Review EU product policy framework** to apply to product types, to look at material recycled content (buildings/cars etc).

• **Industrial Emissions Directive**: include new rules for waste management and resource efficiency in installations permit requirements.
Market for secondary raw materials

Objectives

- increase use and trust in secondary raw materials
- increase use of recycled nutrients and water
- knowledge of material stocks and flows

Key actions

- **Quality.** Secondary raw materials standards
- **Safety.** Chemicals/product/waste law interface
- **Recycled content incentives.** Pledging to start with, then possibly regulation.
- **Green public procurement** rules update
- **Nutrients:** new regulation on fertilisers
- **Water:** minimum requirements for/to reuse water for irrigation and groundwater recharge
- **Data.** EU-wide electronic system for cross-border transfers of waste
Consumption

Objectives

- Better enforcement of consumer protection legislation
- Boosting re-use
- Better information about green credentials of products and services

Key actions

- April 2018 'A New Deal for EU Consumers': enforce circular economy product guarantees for consumers + new individual and mass remedies if greenwash
- Planned obsolescence: set-up of independent testing programme
- Encourage reuse/sharing activities (e.g. 2016 European Agenda for the collaborative economy) 75% material savings with car-sharing
- Circular economy labelling: durability/recyclability information, modernised Ecolabel
Waste management (1/2) legislation

Principles so far:
• Polluter pays, self-sufficiency & proximity
• Waste hierarchy
• Targets 2020: 50% reuse/recycling for household and 70% for construction waste
• Separate collection since 2015: paper, metal, plastic and glass

Newly legislated:
• Household waste recycling targets: 55% by 2025; 60% by 2030; 65% by 2035
• Separate collection: hazardous household waste by 2022, bio-waste by 2023 and textiles by 2025.
• Landfill phase-out: by 2035 no more of 10% of municipal waste
• New extended producer responsibility circularity modulation rules
Waste management (2/2) current EU figures

- 2.5 bn tonnes/year. 450 kg municipal waste per capita (Australia: 565 kg)
- 1.6 bn tonnes is recycled or recovered (64%)
- Landfill is at 42% (31% for municipal waste)
- Recycling at 36% (43% for municipal waste)
- Incineration is at 6% overall (26% of municipal waste)
- 56% drop in net GHG emissions between 2001 and 2010
Plastic (1/3): figures

**Single use is prevalent**

- Consumption at 100 kg/European/year
- Recycled plastics share of demand is 6%
- Less than 30% of the EU's plastic waste is recycled (50% abroad), 39% incinerated, 31% landfilled
- Plastic packaging: 60% of plastic waste

**Emissions savings potential**

- BAU: Emissions to double by 2050 to over 200 m tonnes CO2/year
- Recycling saves 90% of CO2 emissions/production.
- Each tonne of produced plastics results in 2.5 tonnes of CO2 emissions. Carbon embedded in the material is another 2.7 tonnes of CO2, released when incinerated.
- Re-use and recycling could provide 60% of plastics demand by 2050, cutting emissions by 50%.
Plastic (2/3): litter and leakage

In the EU:
- SUP is 70% marine litter. Fishing gear: 27% of beach litter
- Microplastics: 75 000 - 300 000 tonnes released

Globally: up to 4% of production ends up in ocean

Most common single use plastic item found on EU beaches

50% Single use plastics
34% Other plastics
16% Non plastics

500,000 tonnes of plastic in the oceans

Globally: up to 4% of production ends up in ocean
### Plastics (3/3): strategy and tabled legislation

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Key actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics/Emissions</td>
<td>100% packaging <strong>cost efficient</strong> re-use or recycling by 2030</td>
</tr>
<tr>
<td></td>
<td>50% recycling rate for all plastics by 2030</td>
</tr>
<tr>
<td>Microplastics</td>
<td><strong>Intentionally added micro-plastics and oxo-plastics bans</strong></td>
</tr>
<tr>
<td>Curbing waste and littering</td>
<td><strong>Single-use plastic bans</strong>: plastic cotton buds, cutlery, plates, straws, drink stirrers and sticks for balloons and drink containers with unattached caps and lids.</td>
</tr>
<tr>
<td></td>
<td><strong>Compulsory labelling</strong>: sanitary towels, wet wipes and balloons.</td>
</tr>
<tr>
<td></td>
<td><strong>Producer obligations to pay for collection/awareness campaigns</strong>: food containers, packets and wrappers, drinks containers and cups, cigarette butts, wet wipes, balloons and lightweight plastic bags.</td>
</tr>
<tr>
<td></td>
<td><strong>Reduction target for single use food and drink containers</strong>: alternatives at point of sale/ensure not given for free.</td>
</tr>
<tr>
<td></td>
<td><strong>Plastic drinks bottles</strong>: 90% collection by 2025</td>
</tr>
<tr>
<td></td>
<td><strong>Fishing gear</strong>: EPR from port to treatment</td>
</tr>
</tbody>
</table>
THE SEDUCTIVE POWER OF
SINGLE USE PLASTICS
Helpline – Advice – Support