

Circular Economy: Plastics

Werner Bosmans

DG Environment 10 February 2017



More plastic than fish in our oceans by 2050?









Endocrine disruptors, POPs, plastic fibres: "bon appetit!"





What to do?







- **1. Plastic production relies on** fossil fuel with high life-cycle GHG impacts
- 2. The full potential of plastic reuse and recycling is yet to be used
- 3. Plastic leaks into the environment



1. High dependence on fossil feedstock

- Raw material is cheap (> 90% from virgin material)
- 400 mln T of GHG (2012)
- By 2050, it could rise to:
 - 20% of global oil consumption
 - 15% of global GHG





Options

Alternative feedstock

 Biomass? CO₂?





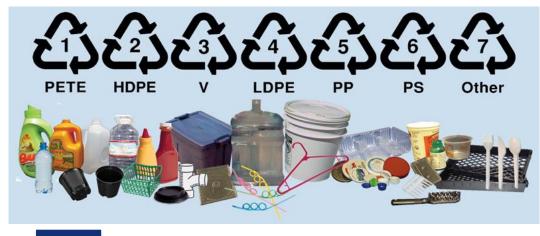
2. Low reuse and recycling of plastics

- 25 mln T of plastic waste (2014, EU)
 - 30% recycled
 - 39% incinerated
 - 31% landfilled



=> too valuable to be burnt or landfilled

- Plastic packaging: 40%
- EU exports 50 % of what is collected for recycling
- Virgin ⇔ secondary





Options

- REUSE => other business models
- Better recyclability of plastics
 - <u>Design</u> => durability, reusability, reparability, <u>recyclability</u>
 - Do we need toxic plastic ?
 - => waste, chemicals & product policy
 - => traceability
- Innovative technologies

Research & innovation for reuse, sorting & recycling





Options (2)

- Legislation and incentives to support
 - Waste legislation: Separate collection of plastics, targets for recycling (50% in 2020, 55% of packaging in 2025)
 - Favour resource-efficient solutions
 re-use => recycling => energy recovery
- Secondary plastic materials
 - Promote market for recycled plastics
 - Standards on recycled plastics to promote quality
 - Support industrial fora & platforms

ONE BOTTLE = ONE CASE

rpe1



(45 bottles)

We're taking the plastic from one PET water bottle and turning it into a rPET Barely There. This sustainable case extends the life of plastic beyond the landfill

-

CASE·MATE



Jeep* Wrangler Unlimited (45 bottles) (16 bottles)





3. Leakage into the environment

- 5-13 mln T of plastic waste end up in the oceans
- Problem is global
- Single-use plastic products?
- Cheap and disposable material that is a driver for early obsolescence
- Microplastics (<5 mm) = threat to animal & human health







Options

- Marine litter
 - Reduce microplastics
 - Aspirational 30% reduction target in CEAP / SDGs
- Sustainability criteria for biodegradable plastics
 - Develop EU-harmonised criteria for biodegradability (composting) where appropriate
 - Assessing the use of oxo-plastics
- Consumers' awareness
 - Raise the awareness through better information





Policy tools to address system failures

- Studies: problem setting, options identification
- **Research** for innovative technologies
- **Standardisation:** assessment & mandate
- Platform: exchanges on new business models industrial symbiosis
- Voluntary agreements
- Innovation deals
- Funds to support **investments**
- Legislation
- **Monitor** progress: perf<u>ormance & resource efficiency</u>



Linear plastic is out - Circular is IN

- **Design!** Durability, recycling, toxicity, microplastics
- Incentives for collection, sorting & recycling of all plastic
- Develop markets for secondary plastic

Further steps:

- $_{\odot}$ Communication by the end of 2017
- Possible consultation
- $_{\odot}$ Stakeholder reactions on the Roadmap



For your comments: the Roadmap for a Strategy on Plastics



http://ec.europa.eu/smartregulation/roadmaps/docs/plan_2016_39_plastic_strategy_en.pdf



Thank you

Werner.Bosmans@ec.europa.eu

refuse



return & collect



share



sort



www.shutterstock.com - 228418336

reuse



