

# Circular Economy: Plastics

Werner Bosmans

DG Environment  
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Gesundheit!





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



# What to do?



**A new  
plastic industry**



**Roadmap**

# Issues

- 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? CO<sub>2</sub>?



## 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
  - **Design** => durability, reusability, reparability, recyclability
  - 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



# rPET

ONE BOTTLE = ONE CASE



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



(45 bottles)



Jeep® Wrangler Unlimited

(45 bottles)



Jeep® All-Weather Baby Carrier

(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: performance & resource efficiency



# 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:

- Communication - by the end of 2017
- Possible consultation
- Stakeholder reactions on the Roadmap

# For your comments: the Roadmap for a Strategy on Plastics



[http://ec.europa.eu/smart-regulation/roadmaps/docs/plan\\_2016\\_39\\_plastic\\_strategy\\_en.pdf](http://ec.europa.eu/smart-regulation/roadmaps/docs/plan_2016_39_plastic_strategy_en.pdf)

# Thank you

[Werner.Bosmans@ec.europa.eu](mailto:Werner.Bosmans@ec.europa.eu)

**refuse**



**share**



**reuse**



**return & collect**



**sort**



**recycle**

