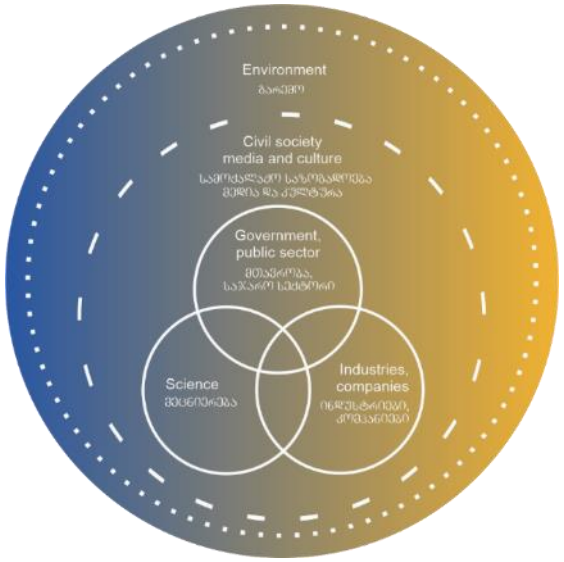


ევროკავშირი საქართველოსთვის
The European Union for Georgia

TWINNING

EU ENI East Twinning project
Supporting inter-sectoral collaboration possibilities between Research and Industry
GE 18 ENI OT 02 19

The European Green Deal

Mobilising industry
for a clean and circular economy

Public lecture

"EU GREEN DEAL POLICIES AND RELATION TO SCIENCE"

24 September 2021, Tbilisi, Georgia,
in the framework of the "European Researchers' Night" organized by SRNSFG

by Maria Krasteva

science KNOW

business GROW

umweltbundesamt
ENVIRONMENT AGENCY AUSTRIA

JOANNEUM RESEARCH

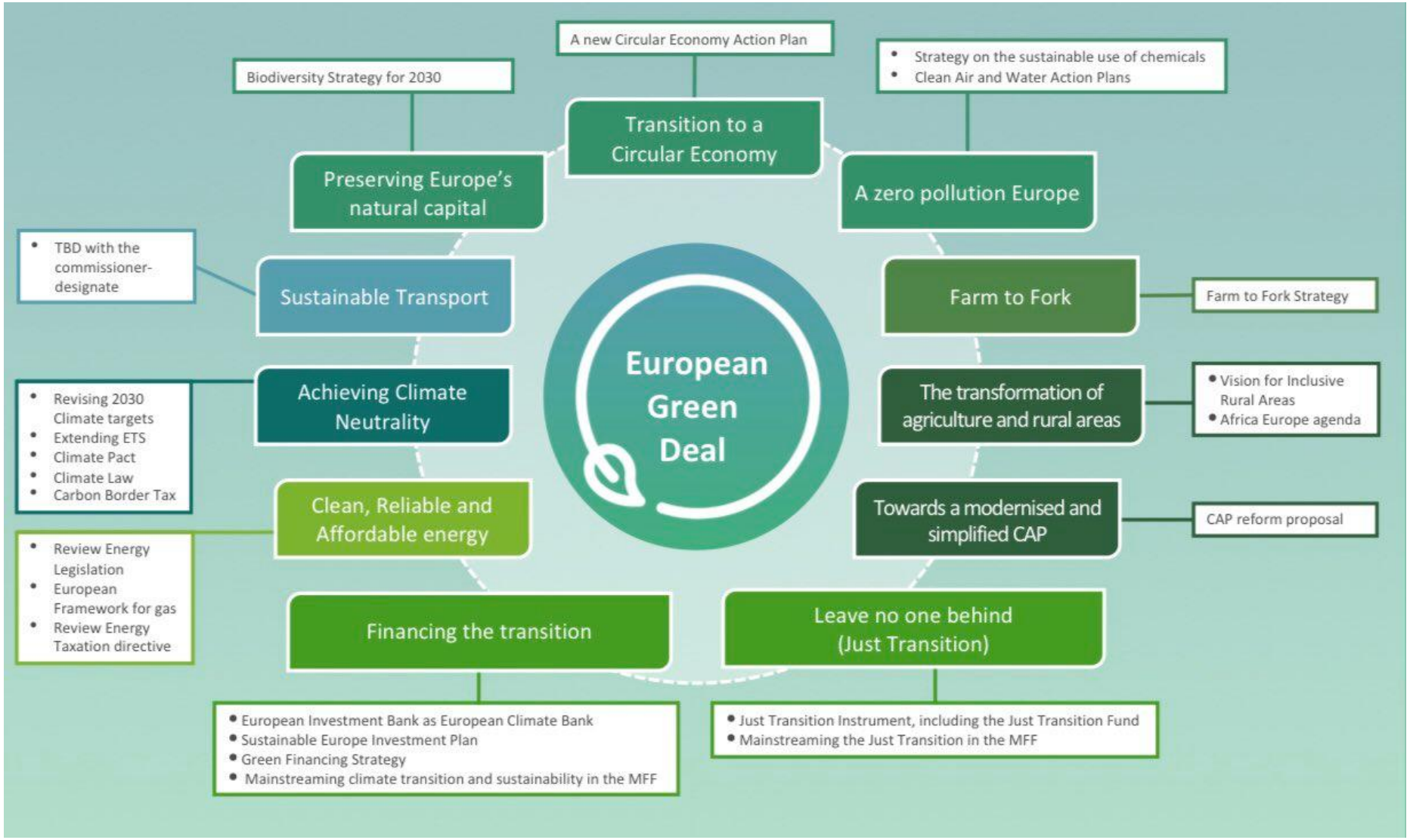
FWF
Der Wissenschaftsfonds.

DLR Projektträger

FFG
Promoting Innovation.

SCIENTIA VINCES

The European Green Deal – a comprehensive response



Circular economy solutions must be a key priority in the climate debate. Doubling the current global circularity rate of 8.6% will cut 39% of emissions and 28% of virgin resource usage (Circularity Gap report 2021, Circle Economy).

Overview of the key relevant policies of the EU

Towards a circular economy: A zero waste programme for Europe (2014-2022)
Closing the loop - An EU action plan for the Circular Economy (2015)
Clean Energy For All Europeans (2016)
A renewed EU Industrial Policy Strategy (2017)
Monitoring Framework on progress towards a circular economy
A European Strategy For Plastic in a Circular Economy
Sustainable Europe Investment plan
European Green Deal (2019)
Circular Economy Action Plan (2020)

Assessing stage of waste management in Georgia

Waste management performance

- Collection coverage
- Waste generation
- Waste destinations
- **Data quality**

Governance

- Plans and targets
- Responsibilities
- Extended Producer Responsibiltiy schemes

Legal framework

- Strategies
- Waste management Law, List of waste
- Waste management plans

Incentives

- Collection fees
- Pay-as-you-throw

Collection and treatment infrastructure

- Separate collection
- Treatment plants

Social aspects

- Informal sector
- Jobs

Adopted Legislation on priority waste streams for Circular Economy

Targets for waste oils

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Recovery	15%	18%	23%	25%	30%	35%	40%	45%	50%	50%
Energy recovery	7%	9%	10%	12%	15%	17%	20%	23%	25%	25%
Regeneration	8%	9%	10%	13%	15%	18%	20%	22%	25%	25%

Targets for WEEE

Category		2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
1. Temperature exchange equipment	Recovery	51%	56%	61%	66%	72%	76%	80%	83%	85%	87%
	Reuse and recycling	50%	55%	60%	65%	70%	72%	74%	76%	78%	80%
2. Screens monitors, equipment containing screens having a surface greater than 100 cm^2	Recovery	12%	20%	25%	30%	35%	45%	55%	65%	75%	80%
	Reuse and recycling	10%	15%	20%	25%	30%	40%	50%	60%	65%	70%
3. Lamps	Recovery	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%
	Reuse and recycling	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%
4. Large equipment (external dimension more than 50 cm)	Recovery	58%	62%	67%	72%	75%	78%	80%	82%	84%	85%
	Reuse and recycling	55%	60%	65%	70%	72%	74%	76%	78%	79%	80%
5. Small equipment (external dimension less than 50 cm)	Recovery	15%	20%	25%	30%	35%	40%	45%	55%	65%	75%
	Reuse and recycling	10%	15%	20%	25%	30%	35%	40%	45%	50%	55%
6. Small IT and telecommunication equipment (external dimension less than 50 cm)	Recovery	15%	20%	25%	30%	35%	40%	45%	55%	65%	75%
	Reuse and recycling	10%	15%	20%	25%	30%	35%	40%	45%	50%	55%

Targets for used tires

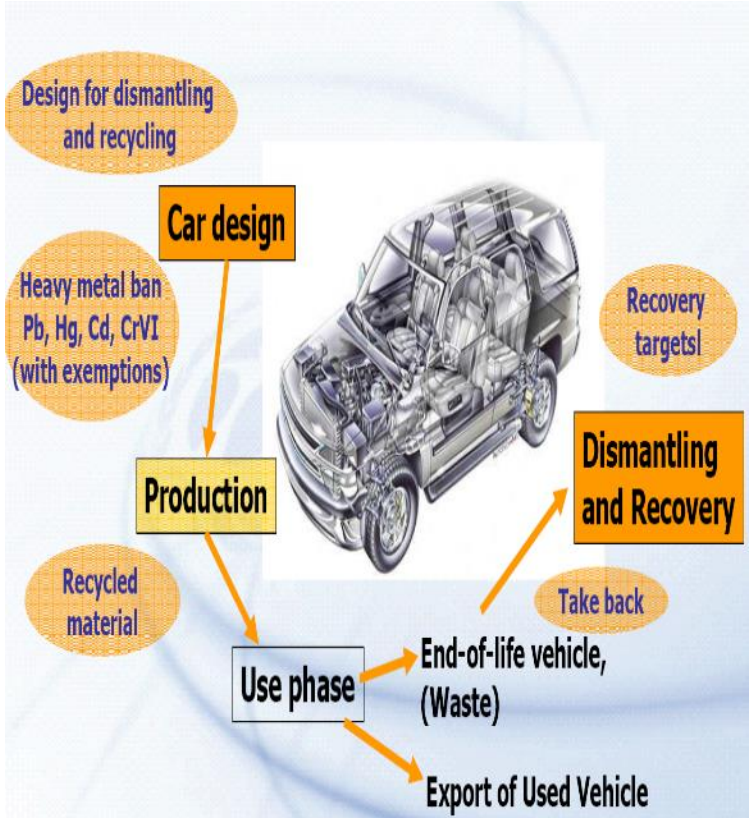
	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Recovery	20%	25%	30%	35%	40%	45%	50%	55%	60%	65%
Energy recovery	10%	12%	15%	18%	20%	23%	25%	27%	30%	32%
Recycling Retreading	10%	13%	15%	17%	20%	22%	25%	28%	30%	33%

Targets for recycling for waste batteries

Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Waste lead acid batteries and accumulators	50%	65%	65%	65%	65%	65%	65%	65%	65%	65%
Waste nickel and cadmium batteries and accumulators	60%	75%	75%	75%	75%	75%	75%	75%	75%	75%
Other waster batteries and accumulators	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%

Targets for recovery and recycling of EolV -draft

	2022	2023	2024	2025	2026	2027	2028	2029	2030
Recovery	72%	74%	76%	80%	82%	84%	86%	88%	90%
Recycling	72%	74%	76%	78%	80%	82%	84%	84%	85%



Targets for recycling of packaging waste –draft

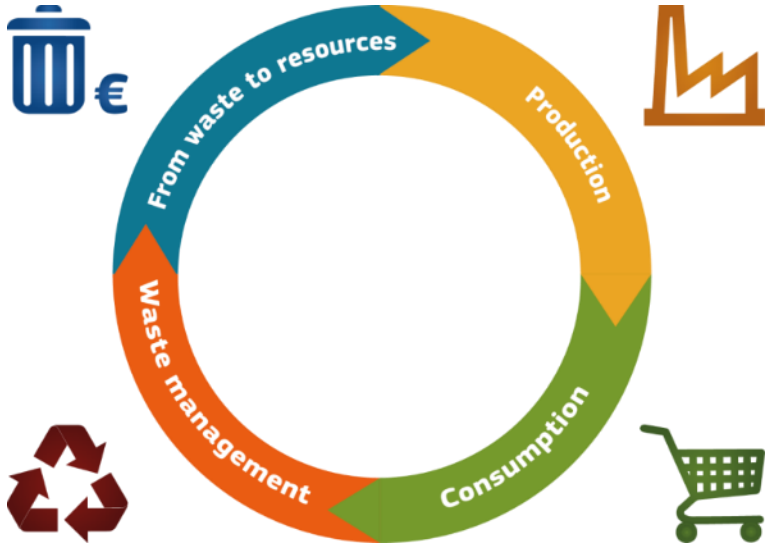
	2022	2023	2024	2025	2026	2027	2028	2029	2030
Recycling rates	41%	46%	51%	56% (55%)	58%	60%	62%	64%	68% (65%)
Paper	53%	55%	58%	60%	63%	66.00%	69%	72%	75%
Plastic	46%	47%	49%	51%	52%	54.04%	55%	55%	56%
Glass	41%	47%	54%	60%	62%	64.61%	66%	68%	70%
Metal	31%	38%	44%	50%	54%	58.73%	63%	66%	70%
Tree	8%	10%	13%	15%	17%	19.00%	21%	23%	25%

THE NEW CIRCULAR ECONOMY ACTION PLAN

Getting the Economics Right
- EPR modulation
- VAT rates and other taxes
- Mandatory Green Public Procurement

Financial Market
- Sustainable Finance Taxonomy
- Corp. Governance Framework
- Non-financial reporting F

Global Level Playing Field
- Global Agreements on Plastics
- Global Circular Economy Alliance
- Partnership with Africa
- FTAs



Investment R&I
- LIFE
- Horizon Europe
- Intellectual Property Strategy

Nobody Left Behind
- Skills Agenda + Pact for Skills
- Social Fund Plus
- Cohesion Policy
- European Urban Initiative
- European Circular Economy Stakeholder Platform

Monitoring
- Footprint indicators
- New indicators for focus areas
- Measuring climate neutrality and zero pollution
- Horizon Europe projects

THE NEW CIRCULAR ECONOMY ACTION PLAN

35 actions along the entire life cycle of products, to:

- Make sustainable products the norm in the EU
- Empower consumers and public buyers
- Focus also on key product value chains: electronics and ICT; batteries and vehicles; packaging; plastics; textiles; construction and buildings; food; water and nutrients
- Ensure less waste
- Make circularity work for people, regions and cities
- Lead global efforts on circular economy

Waste management

Separate collection:

- Mandatory separate collection of at least paper, metal, plastic, glass + bio-waste (by end 2023) & hazardous household waste and textiles (by end 2024)

- Priority waste streams – plastic, WEEE, Textile, Waste batteries, Food waste

- Selective demolition and sorting systems for construction and demolition (C&D) waste (material specific)

- No incineration or landfilling of separately collected waste for recycling

- Waste Extended producer responsibility (EPR) schemes:

- Producers cover the costs of separate collection and treatment and the costs necessary to meet EU targets

- EU Member States to introduce mandatory EPR schemes for all packaging by end 2024

Sustainable Products Principle

- Improve durability, reusability, upgradability and reparability
- Address presence of hazardous chemicals and increasing recycled content
- Restrict single-use and counter premature obsolescence
- Incentivise product-as-a-service
- Digitalisation, including digital product passport

Collaboration is key

To transition to a circular economy we must:

- scale circular solutions
- forge new collaborations, between:
  - ✓ businesses
  - ✓ governments,
  - ✓ researchers,
  - ✓ financial institutions,
  - ✓ civil society organizations and others

Focusing on the priorities - general

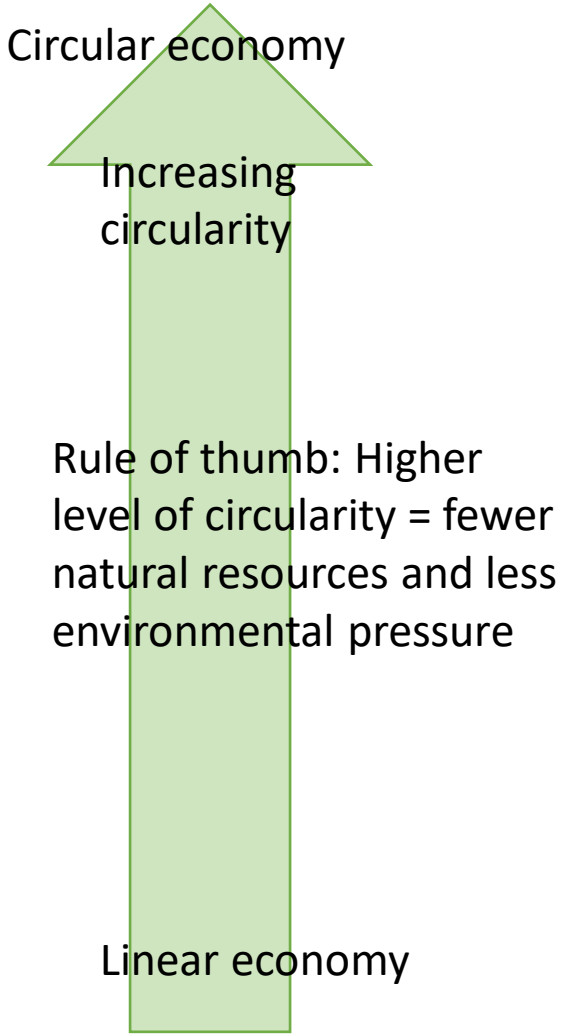
- Circular design including increasing the supply of high quality and competitively priced recycled materials in order to meet demand.
- Investing in new technology and significantly scaling up facilities.
- Research respond to develop new science-based methodologies and tools to guide new business model design and measure impact.
- Governments and financial organizations need to provide an enabling environment to support companies implementing these kinds of circular business models.
- The incentives must be put in place for both consumers and business-to-business customers to return products through deposit and buy-back schemes, and refurbishment.
- It is crucial for businesses to share their success stories and learnings to show the best way forward.
- For the circular economy to reach scale, governments and businesses need to invest in collection and sorting facilities – and plan them strategically so they are in the right place and work efficiently.
- It is important to enable efficient transboundary reverse supply chains,

European Union Policies and Legislation

- aim to be based on sound scientific evidence and constant innovation
- are participatory through inclusion of all economic and social stakeholders in their definition
- are adopted to a large extent by Georgia in its Association Agreement with the European Union
- are based on transition to sustainable development as defined in the European Green Deal policies, and again
- require constant science based innovation for their implementation

10 R-hierarchy of circularity

- R_0 Refuse
- R_1 Rethink
- R_2 Reduce
- R_3 Re-use
- R_4 Repair
- R_5 Refurbish
- R_6 Remanufacture
- R_7 Repurpose
- R_8 Recylce
- R_9 Recovery



Manufacturing industry in Georgia –-challenges and fields that need R&I (1)

Create the model of strategic partnerships between academia and science and the manufacturing industry in order to encourage innovations and development.

Implementation of the basic principle of circular economy for manufacturing industry:	Selection of materials with high circularity in the process of use of materials;
	Introduce standards for simple dismantling;
	Green technologies; adaptability and multi-functionality;
	Design-to-last; circular distribution; and innovative models.

Manufacturing industry in Georgia –-challenges and fields that need R&I (2)

Use of easily renewable resources;
Combining the resources in a way that allows easy separation; maximum efficiency in the use of resources;
Minimal amount of generated waste;
Minimal amount of waste that cannot be reused;
Use of generated waste in the remanufacturing process for identical or different products;
Maximum extension of value provided by a product or a service; sharing a product or a service instead of purchasing it;
Option to repair the product or to return it to the market;

Manufacturing industry in Georgia –-challenges and fields that need R&I (3)

Overview of the situation and necessary investments by analyzing the costs and benefits of transition to circular economy in the manufacturing industry, and
then prioritize the manufacturing industry sectors through detailed (socio-economic) analyses.
Create a monitoring system for materials that are being used.
Use alternative energy sources in a sustainable manner in the industrial manufacturing.
At the national level educational programme to promote trainings for company staff teaching them new skills and explaining the new business processes in the global market.
Recycling to bring back resources in the production process and create new values in the most efficient way;
Establishing networks between those that generate waste and those that use it as a resource.

Textile waste in Georgia –-challenges and fields that need R&I

Establish National Strategic Concept based on feasibility and deep studies on the current situation in Georgia based on sound scientific evidence and constant innovation
Establish Legal framework for Sustainable management of textile waste
R&I to extent applying the new sustainable product framework to textiles including developing eco-design measures to ensure that textile products are fit for circularity, ensuring the uptake of secondary raw materials, tackling the presence of hazardous chemicals;
Empowering business and private consumers to choose sustainable textiles and have easy access to reuse and repair services;
R&I to promote eco-design for clothing and textiles in collaboration with fashion designers and retailers.
Establish a short-term textile industry action group in cooperation with Science that identifies opportunities to: explore options to improve future circularity in textiles including the potential for introducing Extended Producer Responsibility schemes for textiles

Plastic and Packaging waste-challenges and fields that need R&I (1)

Adoption of **quality standards**. Quality of recycled plastic materials remains the biggest barrier to stronger use of recyclates.

Green Public Procurement (GPP) is an instrument for integrating circular economy principles into procurement.

Improving the existing collection and recycling schemes.

Actions to reduce single-use plastics.

Actions to tackle sea-based sources of marine litter.

Actions to tackle sea-based sources of plastics from agriculture.

Curb microplastics pollution.

Similarly to the EU member states, **in the circular economy transition process in Georgia, the biggest challenge will be adapting the industry that manufactures plastic packaging.**

Plastic and Packaging waste-challenges and fields that need R&I (2)

Avoid **unnecessary plastic use** e.g. by encouraging usage of non-plastic alternatives.
Encourage use of **recycled material** not containing hazardous substances.
Use of bio-based plastic materials from sustainable sourcing
Home-compostable biodegradable plastics could be considered as reasonable alternatives to plastics.
Encourage design of products containing more reusable plastic parts and materials – introduction of targets for reuse
Design of products that are easily collectable and sortable at the end-of-life stage – requiring symbols for identification of material
Design for easy dismantling of products e.g. by using types of connections that allow separation of plastic parts.

Project examples:

- https://ec.europa.eu/programmes/horizon2020/en/news/creating-light-urban-vehicles-future
- https://cordis.europa.eu/project/id/642190
- https://ec.europa.eu/programmes/horizon2020/en/news/building-3d-solution-resource-efficient-construction
- https://ec.europa.eu/programmes/horizon2020/en/news/creating-light-urban-vehicles-future
- https://ec.europa.eu/programmes/horizon2020/en/news/flipt-how-replace-plastic-creation-sustainable-and-resistant-fibre
- **https://cinea.ec.europa.eu/life/life-close-market-projects_en#ecl-inpage-1276**

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DLR Projektträger

FWF Der Wissenschaftsfonds.

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Thank you for your attention!

Maria Krasteva
Environment Agency Austria