



Navigating Packaging Regulations in the US and EU

SANDEEP KHATUA

AFHA Regulatory Summit
7 August 2024

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Inspire trust.**

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technical
experts



150+

years of safety,
security & sustainability



1,000+

locations
worldwide



26,000+

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employees



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billion in
annual revenue



100 %

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& impartial

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A dark blue silhouette of a world map is centered in the background of the slide.

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Austria
Bahrain
Bangladesh
Belgium
Bosnia & Herzegovina
Brazil
Canada
China
Croatia
Czech Republic
Denmark
Egypt
Finland
France
Hungary
India
Indonesia
Italy
Japan
Malaysia
Mexico
Netherlands
Norway
Oman
Philippines
Poland
Portugal
Qatar
Romania
Saudi Arabia
Singapore
Slovakia
Slovenia
South Africa
South Korea
Spain
Sweden
Switzerland
Thailand
Turkey
UAE
United Kingdom
United States
Vietnam

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**Testing and
product
certification**



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CONTACT:
Sandeep Khatua, *Global Technical Director*

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20 24

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Image: CITEO

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Regulatory landscape in the EU & US

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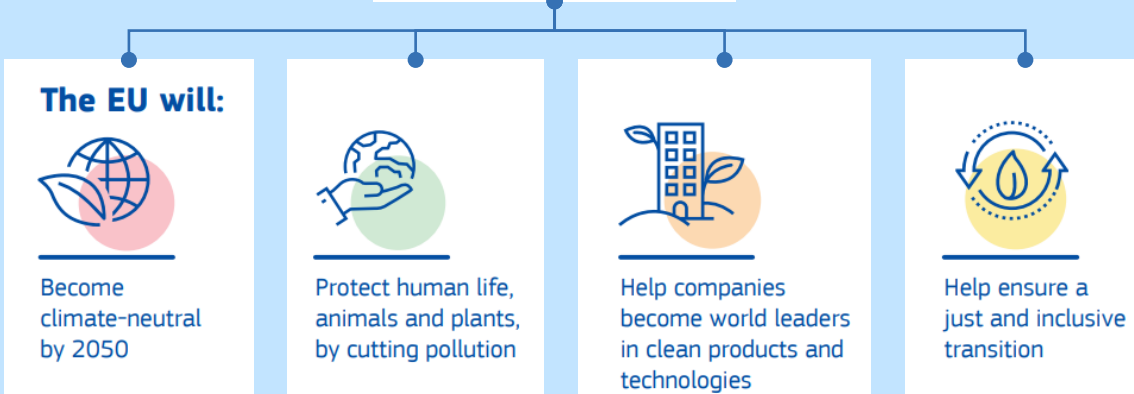
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Testing and Claim Verification

European Union introduced a strategic plan for sustainability development in 2019

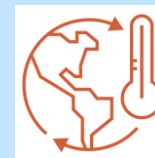
What is the European Green Deal?

- The European Green Deal is a strategic plan introduced in 2019
- It aims to make the EU greener and reach climate neutrality by 2050. It underlines the need for a holistic and cross-sectoral approach.

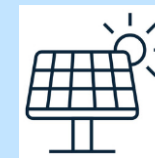


What initiatives are included in the Green Deal?

- As a package of policy, the Green Deal includes massive initiatives covering the climate, the environment, energy, transport, industry, agriculture and sustainable finance – all of which are strongly interlinked.



Climate



Energy



Transport



Building



Environment



Agriculture



Industry



Finance

Image: European Commission

The Circular Economy Action Plan in EU

- The **Circular Economy Action Plan (CEAP)** is one of the key instruments of the Green Deal and aims to promote sustainable production and consumption.
 - Make sustainable products the new norm
(promote the design of sustainable products)
 - Empower consumers and public buyers
(anti-green washing, ensure the green claims reliable & trustworthy)
 - Reduce waste and improve circularity
(promote the reuse, repair, and recycling of products and materials)
 - Focus on some key product value chains, such as ENE, Battery, **Packaging** ...

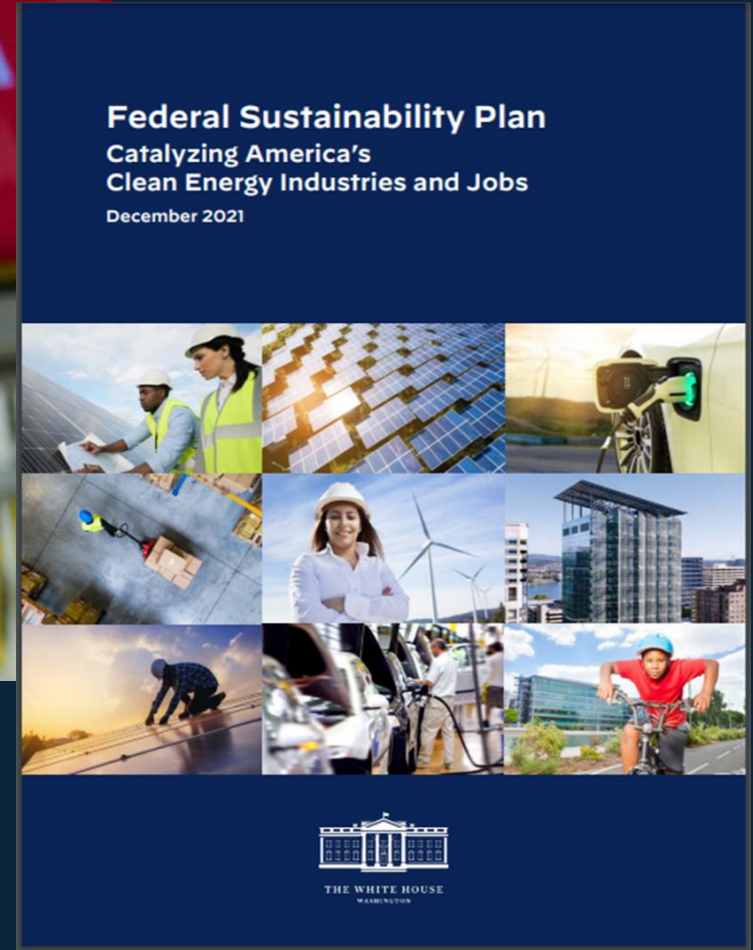


Image: European Commission

US Federal Sustainability Plan



Image: [Office of the Federal CSO](#)






US Federal Sustainability Plan



 <p>100% Carbon Pollution-Free Electricity by 2030, including 50% on a 24/7 basis</p>	 <p>100% Zero-Emission Vehicle Acquisitions by 2035, including 100% light-duty acquisitions by</p>	 <p>Net-Zero Emissions Buildings by 2045, including a 50% reduction by 2032</p>	 <p>Develop a Climate- and Sustainability-Focused Workforce</p>	 <p>Advance Environmental Justice and Equity-Focused Operations</p>	 <p>Accelerate Progress through Domestic and International Partnerships</p>
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Image: Office of the Federal CSO

 <p>Net-Zero Emissions Procurement by 2050</p>	 <p>Net-Zero Emissions Operations by 2050, including a 65% reduction by 2030</p>	 <p>Climate Resilient Infrastructure and Operations</p>
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DIRECTIVE 94/62/EC will be switched to REGULATION

Directive PPWD

- Increase consistency across EU – "harmonizing" different national approaches
- Mandatory for all Member States.

Regulation PPWR



2024

→ Objectives of the proposed measures



Prevent and reduce packaging waste, including by more reuse and refill systems



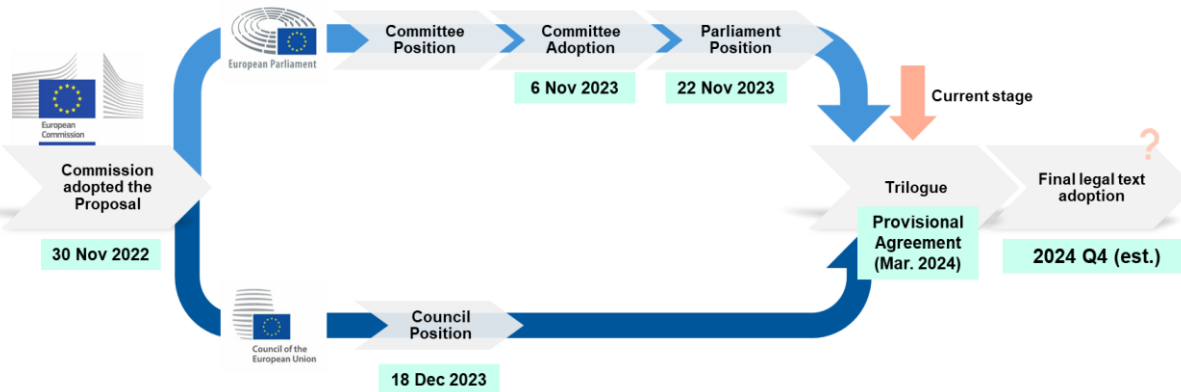
Make all packaging on the EU market recyclable in an economically viable way by 2030



Increase use of recycled plastics in packaging in a safe way



Decrease the use of virgin materials in packaging and put the sector on track to climate neutrality by 2050



▪ Status of PPWR:

- The draft proposal was published on 30 November 2022
- Currently under the legislative procedure, needs to be approved by the Council and Parliament
- **Expected** to be finally adopted in **late 2024**, the earliest application may start **from 2025**

New Sustainability Requirements under the upcoming Packaging and Packaging Waste Regulation (PPWR)



Substance in
Packaging



Recyclability



Recycled Content



Biobased Feedstock



Compostability



Packaging Format



Other



- **For all packaging:**
 - Restriction on chemicals set out in **Annex XVII of REACH**
 - Heavy metal: the sum of concentration levels of **lead, cadmium, mercury and hexavalent chromium** resulting from substances present in packaging or packaging components shall not exceed 100 mg/kg. *(has been effective since Directive 94/62/EC)*
 - **Substance of concern** that negative affect the reuse and recycling of materials in the packaging will be restricted based on the report by the Commission (with European Chemical Agency) — the report will be prepared by 31 December 2026
 - The compliance shall be demonstrated in the **technical documentation**
- **Additional requirements for food contact packaging:**
 - Comply with food contact packaging regulation (EC) 1935/2004
 - Restriction on **the PFAS** in the Food contact packaging *(18 months from entry into force, around mid 2026)*



Recyclability

- All packaging placed on the market shall be recyclable.
 - Recyclability criteria will be regulated later by secondary acts
 - Design for material recycling firstly from 1 Jan 2030 (est.) and then the waste of packaging can be recycled at scale from 1 Jan 2035 (est.)
- Packaging recyclability shall be expressed in the recyclability performance grades
 - Packaging with Grade D & E shall not be placed on the market **by 1 January 2030 or 24 months after entry into force of the delegated acts**
 - Packaging with Grade C shall not be placed on the market **by 1 January 2038**
- Compliance with the requirements shall be demonstrated in the **technical documentation.**

Recycled Content:

Minimum recycled content in plastic packaging



Different plastic packaging categories	By 1 January 2030 or 3 years after the date of entry into force of the implementing act (the latest one)	By 1 January 2040
▪ contact sensitive packaging, made from PET as the major component	30%	50%
▪ contact sensitive packaging made from plastic materials other than PET	10%	25%
▪ single use plastic beverage bottles	30%	65%
▪ other plastic packaging	35%	65%

- The recycled content used should be recovered from **post-consumer plastic waste**
- The minimum percentage shall be calculated as an average **per manufacturing plant and per year**
- Compliance shall be demonstrated by economic operators in the technical information
- **By 1 January 2030, the EPR fee** shall be modulated based on the percentage of recycled content used in the packaging
- The methodology for the calculation and verification will be set up later by 2026

Bio-based Content in Packaging



- The Commission shall review the state of technological development and environmental performance of bio-based plastic packaging. → after 3 years from the date of entry into force of this regulation.
- Based on the review, the Commission shall present a legislative proposal to:
 - (a) lay down sustainability requirements for bio-based feedstock in plastic packaging;
 - (b) lay down targets to increase the use of bio-based feedstock in plastic packaging
 - (c) introduce the possibility to achieve the targets of using minimum recycled content by using bio-based plastic feedstock instead of recycled content recovered from post-consumer plastic waste in case suitable recycling technologies for food contact packaging complying with the requirements laid down in Regulation (EU) 2022/1616 are not available

Compostable Packaging



- By **36 months** after the entry into force of this Regulation



Compostability

Packaging Type	Requirements
<ul style="list-style-type: none"> permeable tea, coffee or other beverage bags or soft after-use system single-use units sticky labels attached to fruit and vegetables 	<ul style="list-style-type: none"> shall be compatible with: <ul style="list-style-type: none"> - the standards for composting in <i>industrially controlled conditions</i> in bio-waste treatment facilities - or home composting, when required by MS
<ul style="list-style-type: none"> Non-permeable coffee, tea or other beverage system single-serve unit (composed of material other than metal) very lightweight plastic carrier bags and lightweight plastic carrier bags Other packaging which the MS already required that they be compostable before the Regulation. 	<ul style="list-style-type: none"> Composability or biodegradability properties can be required by the member states (depends on the local bio-waste collection schemes and the availability of waste treatment infrastructure)
<ul style="list-style-type: none"> Other packaging: such as packaging made of biodegradable plastic polymer and other biodegradable materials 	<ul style="list-style-type: none"> shall allow material recycling without affecting the recyclability of other waste streams

Restrictions on use of certain packaging formats



Packaging Format

- From 1 January 2030, economic operators shall not place on the market packaging in the formats and for the purposes listed in Annex V.



Single-use grouped packaging (i.e., collation films, shrink wrap)



Single use plastic packaging for unprocessed fresh fruit and vegetables (i.e., nets, bags, trays, containers)



For illustrative purpose only

Single use plastic packaging for foods and beverages filled and consumed within the HORECA premises (i.e., trays, disposable plates and cups, bags, boxes)



Single use plastic packaging for condiments, preserves, sauces, coffee creamer, sugar, and seasoning in HORECA sector (i.e., sachets, tubs, trays, boxes)



Single use packaging in the accommodation sector (i.e., shampoo bottles, hand and body lotion bottles, sachets around bar soap)



Very lightweight plastic carrier bags

Extended Producer Responsibility (EPR) in the EU

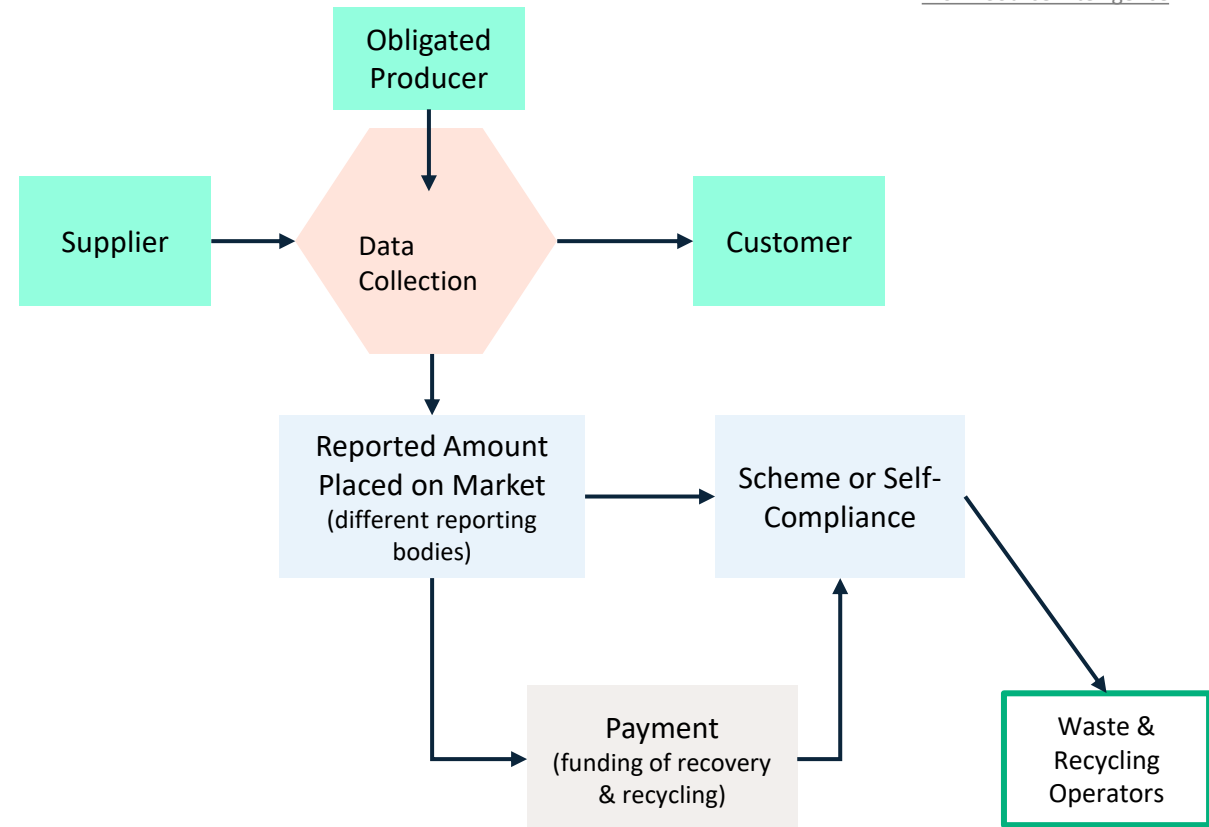


What's the EPR?

- An environmental policy approach that makes producers responsible for the entire lifecycle of their products, including design, take-back, recycling, and final disposal.
- The Organization for Economic Co-operation and Development (OECD) defines policies with the following attributes as EPR policies:
 - The shifting of responsibility upstream toward the producer and away from municipalities
 - The provision of incentives for producers to consider environmental impacts when designing products
- Any type of product can be within the scope of EPR legislation, but the three core product categories in the EU are WEEE (Waste Electrical and Electronic Equipment), **packaging**, and batteries. (Textiles EPR is coming)
- While the European Union was the first to introduce and implement the EPR legislative tool, there are now active and various EPR policies on every continent.

How does EPR work?

From: Source Intelligence



Extended Producer Responsibility (EPR) – How it works in the US

- EPR - is a policy approach that assigns producers responsibility for the end-of-life of products.
- Holding Corporations Accountable for Wasteful Packaging
- EPR for packaging and paper products is gaining attention in the United States.
- This can include both financial responsibility and operational responsibility. Producers are required to provide funding and/or services that assist in managing covered products after the use phase.

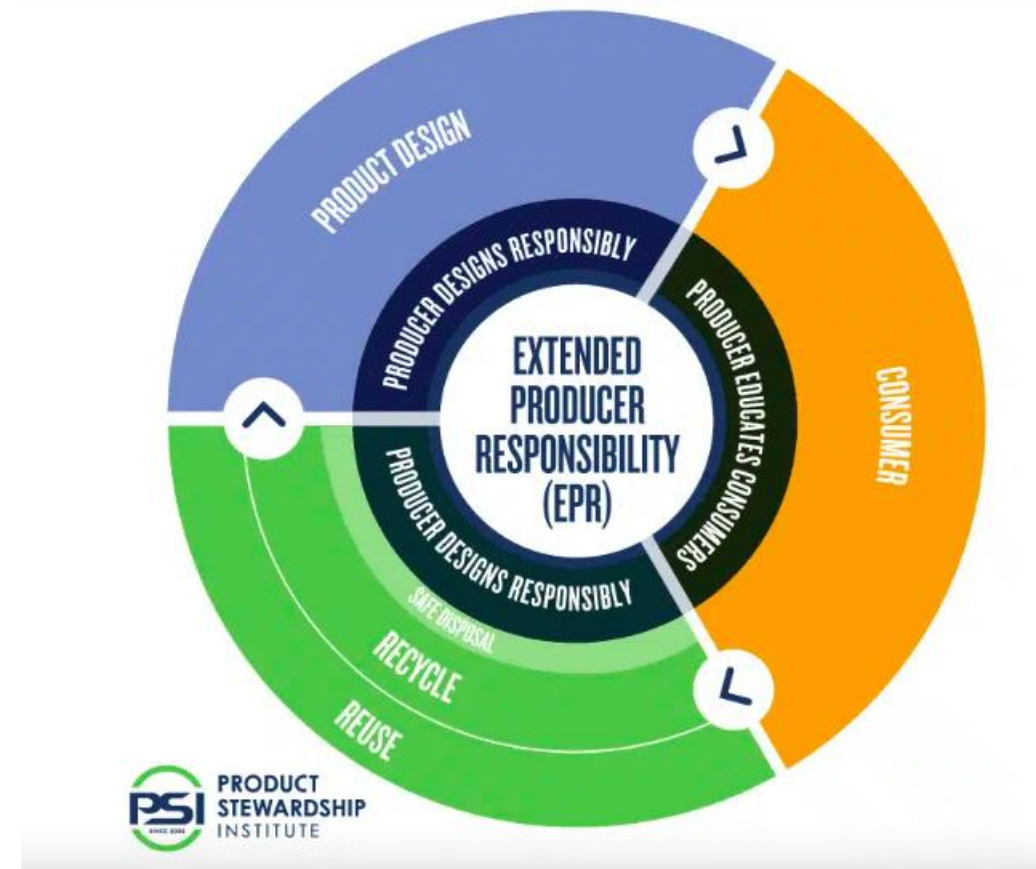


Image: PSI

Maine (LD 1541)



- On 12 July 2021, Maine became the first state in the nation to pass EPR
- Law established packaging stewardship organization (PSO) will control producer waste recycling, and all companies that produce packaging waste in the state will pay into the PSO.
- Companies will pay a specified rate based on the quantity and type of packaging brought into the state. Maine's law provides for only one PSO to conduct recycling efforts.

Oregon (SB 582)



- The packaging EPR law will require companies to join a producer responsibility organization (PRO) and pay annual fees to the PRO based on environmental impact.
- Funding raised from this program will be used to upgrade recycling facilities. The state will specify what materials will be recyclable but exclude beverage containers.
- In Oregon, multiple PROs may be created, which some view as adding another layer of complexity to the program.

Colorado (HB 1355)



- Colorado Gov. Jared Polis has signed this bill into law on 3 June 2022
- Colorado is the first state in the U.S. to develop an extended producer responsibility (EPR) system
- The legislation is designed to reduce plastic waste and improve Colorado's recycling rate.
- This bill also bans PFAS in eight product categories including food packaging by 1 January 2024. The bill also obligates the state to purchase only PFAS-free products.
- On or before 1 June 2023, they are scheduled to designate PRO

California (SB 54)



- Plastic Pollution Prevention and Packaging Producer Responsibility Act (SB 54) signed on 30 Jun 2022
- requiring all packaging in the state to be recyclable or compostable by 1 Jan 2032
- The law will impact manufacturers and sellers of all goods sold in California.
- Law will require all plastic-covered materials offered in California to be recycled at the following levels:
 - At least 30 percent on and after 1 Jan 2028.
 - At least 40 percent on and after 1 Jan 2030.
 - At least 65 percent on and after 1 Jan 2032.
- In addition, the producers of covered material must join a producer responsibility organization (PRO) by 1 Jan 2024, or be prohibited from selling importing or distributing covered materials in California.

Minnesota (HF 3911)



- Minnesota's Packaging Waste & Cost Reduction Act, which was signed into law in May 2024, establishes an Extended Producer Responsibility (EPR) program for packaging materials and paper products.
- Under this law, producers are required to report data on packaging placed onto the market in Minnesota and pay corresponding EPR fees. By 2032, all packaging must be reusable, recyclable, or compostable, and specific recycling targets are set for different materials.
- Key Timelines:
 - 1 January 2025: Selection of PRO
 - 1 July 2026: Deadline for producers to register with a PRO
 - 1 October 2028: PRO must submit a stewardship plan



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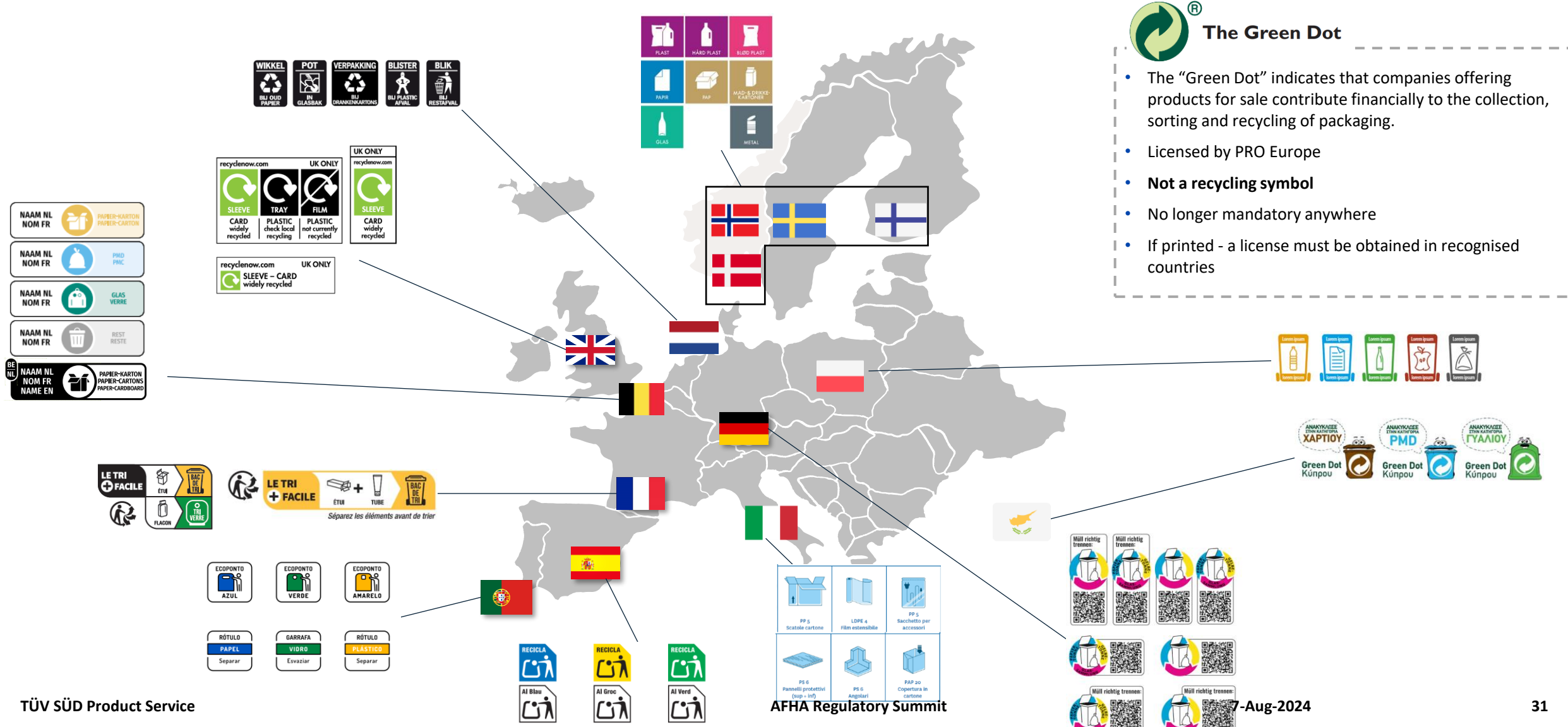
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EU labelling mess

There is currently no unified format among the countries!!!



The Green Dot

- The “Green Dot” indicates that companies offering products for sale contribute financially to the collection, sorting and recycling of packaging.
- Licensed by PRO Europe
- **Not a recycling symbol**
- No longer mandatory anywhere
- If printed - a license must be obtained in recognised countries

Plastic ban and TAX



Plastic Levy in the EU

- **Purpose:** To reduce plastic waste and generate revenue for the EU budget.
- **Mechanism:** A fee of €0.80 per kilogram of non-recycled plastic packaging waste is imposed on EU member states.
- **Implementation:** Started in 2021 and is based on data reported by member states.
- **Impact:** Aims to incentivize recycling and reduce plastic waste within the EU.

Plastic Tax in the US

- **Status:** Currently, there is no federal plastic tax in the US.
- **State-level initiatives:** Some states have implemented their own plastic bag fees or bans to reduce plastic pollution.
- **Potential impact:** A nationwide plastic tax could incentivize recycling and reduce plastic waste, similar to the EU's approach. However, there is no concrete proposal or legislation in place at the federal level.






The EU has a centralized plastic levy, while the US has a patchwork of state-level regulations.

The EU levy directly targets plastic packaging waste, while US regulations often focus on single-use plastics.

Overall, the EU has taken a more proactive approach to reducing plastic waste through a unified levy, while the US is still exploring various options at the state level.

Cracking Down on Deceptive Green Claims



	European Union	<ul style="list-style-type: none">• Empowering Consumers to Green Transition Directive• Green Claims Directive
	United Kingdom	<ul style="list-style-type: none">• Consumer Protection from Unfair Trading Regulations• CMA Green Claims Code
	United States	<ul style="list-style-type: none">• FTC Green Guides• California Recyclable and Packaging Laws• Washington Plastic Product Degradability Law
	Canada	<ul style="list-style-type: none">• The Competition Act (amended by Bill C-59)
	Australia	<ul style="list-style-type: none">• Australian Consumer Law• ACCC Environmental Claims Code

And more...



Image: Consumer NZ

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TPCH Model Toxics in Packaging Legislation



- Toxics in Packaging Clearinghouse (TPCH) published an update of their Model Toxics in Packaging Legislation in February 2021
- Scope: packaging (including food packaging)



	Current	New
Analytes	4 heavy metals (lead, cadmium, mercury, chromium VI): 100 ppm	<ul style="list-style-type: none"> • 4 heavy metals (lead, cadmium, mercury, chromium VI): 100 ppm • Phthalates: 100 ppm (sum or each) • PFAS: Not used
States adopted	19 US states	None (Note: certain states e.g., ME, NY, VT & WA adopted for food packaging only)



AFIRM Packaging Restricted Substances List (RSL)



Substance	Fibers			Coatings, Dyes & Prints	Natural Materials Including paper and cardboard	Polymers, Plastics, Foams, Natural Rubber & Synthetic Rubber	Metal	Glue	Leather	
	Natural	Blended	Synthetic						Natural	Artificial
Alkylphenol (AP) and Alkylphenol Ethoxylates (APEOs), including all isomers	1	1	1	1	1	1A		1	1	1
Azo-amines and Arylamine Salts	1	1	1		1				1	1
Bisphenols		2	2	2B	1C	2D			2	2
Butylhydroxytoluene (BHT)						2E				
Dimethylfumarate (DMFu)						2F			2	
Formaldehyde	2	2	2	1	1	3		1	2	2
Heavy Metals, Chromium VI ¹				2	2	3G	3		1	2
Heavy Metals, Cadmium Total ¹				2	2H	3J	2		2	2
Heavy Metals, Lead Total ¹				2	2H	3J	2		2	2
Heavy Metals, Mercury Total ¹				2	2	3			2	2
Organotin Compounds	3	3	3	1		1		1	3	1
Perfluorinated and Polyfluorinated Chemicals (PFCs) or "PFAS"	2K	2K	2K	2K	2K			2K	2K	2K
Phthalates				1L		1M		1	2N	1

TÜV SÜD'S biodegradable testing and certification services



- Based on the requirements of **EN 13432** and other European standards and regulations, TÜV SÜD's test program determines the biodegradability during industrial composting of packaging and packaging materials.
- Test results are compared with pass / fail limits, to ensure that the material passes every test requirement. The quality of the compost produced should not be negatively impacted by the addition of the biodegradable packaging material.
- The test criteria include:
 - **Biodegradation** – measures the packaging material's rate of metabolic, microbial conversion into water, carbon dioxide, mineral salts of any other elements present and new cell biomass.
 - **Disintegration** – packaging material is mixed with organic waste for 12 weeks, after which time, no more than 10 percent of material fragments are allowed to be larger than 2 mm.
 - **Toxic substances** – there must be a minimal negative effect on the quality of the resulting compost.
 - **Ecotoxicity effects** – compares compost produced with and without the addition of packaging material.



Recycled Content Verification & Certification Service

- Independent substantiation of a claim about the proportion, by mass, of recycled content which was incorporated in a material, product or packaging.
- It is intended for manufacturers that use recycled post-consumer or pre-consumer material which was recovered from waste and want to demonstrate this.
- The assessment is based on criteria defined by standards like ISO 14021 and related material specific standards: e.g., for mechanically recycled plastic content: EN 15343;
- The assessment is realized by tracing back the recycled materials sourcing and processing along each step in the supply chain (chain of custody) through document and onsite audits.



TÜV SÜD recycled plastic content verification / certification service can be used for:



Raw materials

Scrap

ABS scrap



rPET flakes



Resin granulates

100% recycled resin



Recycled compounded resin



Intermediate products

Plastic roll



Plastic sheet



Finished products

Bottles



And many other products...



Thank you

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