Global Plastics Waste and EPR Laws Ramp up Sustainability Efforts

Extended producer responsibility laws expand across continents, targeting packaging waste, single-use items, and recycled content mandates.

At a Glance

- *Europe's packaging regulation takes effect August 12, requiring recyclable packaging by 2030.*
- *California mandates 65% single-use plastic recycling and 25% reduction targets by 2032.*
- *India enforces recycled content quotas: 30% for rigid packaging, rising to 60% by 2028.*

Plastics-restricting regulations continue to emerge worldwide as governments work to curb the impact of plastic waste.

From Canada's Federal Plastics Registry to the EU's new Packaging and Packaging Waste Regulation, extended producer responsibility (EPR) laws are ramping up pressure to aggressively account for plastics production, usage, and reuse.

Meanwhile, across the US, a patchwork of dozens of plastics laws is in effect or navigating the legislative process. There are, of course, too many to enumerate in one article, but a look at a handful of new laws and emerging legislation paints a vivid picture of the challenges facing the plastics industry.

Aggressive actions in US

Coastal states primarily continued to lead the charge against plastic and packaging pollution with an array of rules that took effect this year or expanded existing laws:

Maine: Prohibits PFAS "forever" chemicals, or phthalates, in some types of food packaging, including food boats, wraps, and liners. However, manufacturers with less than $1 billion of total annual national sales of food and beverage products are exempt from this requirement.

New Jersey: Effective August 1, the state's "Skip the Stuff" law requires restaurants to provide single-use utensils and condiments only upon customers' request. Over 60 towns in the state had already enacted the restriction.

New York: Extended its ban on polystyrene foam packaging (cups, dishes, trays) to cold storage containers (coolers, ice chests). The state also extended its ban on plastic bottles of personal care products measuring less than 12 ounces in hotels with fewer than 50 rooms.

Virginia: Bans all food vendors from using expanded polystyrene containers. The ban, enacted in 2021, initially applied to food vendors with 20 or more locations in the state.

California: Expanded its initial ban on some plastic bags at grocery checkouts to variations made of thicker film that had been considered reusable. Meanwhile, the state's Plastic Pollution Prevention and Packaging Producer Responsibility Act (Senate Bill 54) establishes a statewide EPR program for packaging and single-use plastic food service ware. Regulating agency CalRecycle published a series of packaging producer responsibility targets on its producer guidance web page:

- January 1, 2027: 10% less single-use plastic
- January 1, 2028: 30% single-use plastic recycled
- January 1, 2030: 20% less single-use plastic and 40% single-use plastic recycled
- January 1, 2032: 25% less single-use plastic, 65% single-use plastic recycled, and 100% recyclable or compostable packaging.

Washington: While single-use carryout plastic bags have been illegal in the state since 2021, this year's new rule increases the fee for reusable thick-film plastic carryout bags from 8 cents to 12 cents per bag. The state also offers an "observation form" through which anyone who observes an infraction of single-use plastic bag regulation RCW 70A.530 can notify authorities at the Department of Ecology. Repeated violations can result in a fine of up to $250 per day.

Canada monitoring full cycle of plastics

Canada's Federal Plastics Registry collects data from organizations across the plastics value chain to monitor and track plastic from manufacture to end of life to address plastic waste and pollution.
Data collected will support economic, environmental, educational, and policy objectives to advance a more circular plastics economy in Canada.

"The government of Canada is implementing an ambitious, evidence-based, and comprehensive plan to reduce plastic waste and pollution and protect the environment and human health," explained Cecelia Parsons, spokesperson for Environment and Climate Change Canada. "Working with partners, Canada's plan advances a range of complementary actions across the plastics lifecycle."

The registry requires that producers of packaging, electronic and electrical equipment, and single-use disposable plastic products report annually on the plastic they manufacture, import, and place on the market.

Those Phase 1 reporting requirements, in effect since September 29, 2025, mean organizations must provide the data on Phase 1 reporting requirements for the 2025 and 2026 calendar years. The next reporting date for Phase 1 data is September 29, 2026. However, the ECCC is postponing reporting for Phases 2 and 3 of the registry "to allow more time to refine reporting requirements," Parsons said. "It will also ensure organizations have sufficient time to collect and report high-quality and consistent data that will strengthen Canada's efforts to reduce plastic waste and pollution."

Canadians throw away nearly 5 million tons of plastic waste every year, Parsons added. "Plastic waste and marine litter burden our economy and threaten the health of the environment, including wildlife, rivers, lakes, and oceans. The registry will provide consistent and accessible data and help the government assess and manage environmental and health risks posed by plastics, support policy development, enable market analysis and investment decisions, and stimulate research and innovation."

Europe tightens restrictions

On August 12, the rules of the EU's Packaging and Packaging Waste Regulation takes hold. The measure, which went into full force on February 11, 2025, covers all packaging and packaging waste; sets requirements for manufacturing, composition, and the reusable or recoverable nature of all packaging used in the EU market; and includes packaging waste management and prevention measures.

The PPWR expands on the EU's Single-Use Plastics Directive and will regulate the entire packaging life cycle, from product design to waste handling. The PPWR:

- Restricts certain single-use plastics
- Requires takeout businesses to let customers bring their own containers at no extra cost
- Minimizes "substances of concern," including PFAS in food contact packaging if they exceed certain thresholds

With those restrictions, the PPWR aims to:

- Safely increase the use of recycled plastics in packaging
- Make all EU market packaging recyclable in an economically viable way by 2030
- Also by 2030, ban single-use packaging where it is considered unnecessary or when more sustainable options are available
- Reduce virgin materials in packaging toward climate neutrality by 2050

For consumers, the PPWR will make sorting of waste easier by requiring new informational labels on packaging. Meanwhile, EU member states will have to collect at least 90% of single-use plastic and metal beverage containers by 2029 or set up deposit and return systems.

India, China, and the Middle East

Not to be outdone in EPR laws, India expanded its Plastic Waste Management rules, which now require businesses to manage the lifecycle of their plastic products. To achieve this, all plastic packaging must include traceability aids (QR codes, barcodes). The nation, which generated about 3.4 million tons of plastic waste annually according to the Central Pollution Control Board, will now enforce mandatory annual targets for recycled plastic content. For 2025-26, rigid packaging must contain at least 30% recycled content; that ramps up to 60% by 2028-29. For flexible packaging, those numbers start at 10% and rise to 20%, while for multilayered packaging, the initial target is 5%, rising to 10%. However, producers, importers, and brand owners have a reprieve in that if they fail to meet those targets for 2025-26, they can carry the shortfall forward up to three consecutive years, fulfilling at least one-third of the deficit annually.

China, too, has mandated sustainable packaging by manufacturers, brand owners, and retailers in a roadmap toward 2030 goals. Nine new standards for plastics packaging design and recycling went into effect in February, including considerations for rPET and rHDPE. China's packaging design standards are evolving rapidly and increasingly converging with international technical principles.

And in the Middle East, several countries will enforce bans or limitations on single-use plastics. These initiatives include:

United Arab Emirates: Single-use plastic ban that extends to plastic cups and cutlery

Saudi Arabia: The Saudi Vision 2030 and Green Initiative facilitate development of biodegradable materials

Qatar: Plastic bag regulation requires food establishments to switch to biodegradable, compostable, or reusable versions

Oman: Single-use plastic bag ban

Source: Internal Analysis

The new EPR and recycled content mandates are both a challenge and an opportunity and please find below mentioned are the key implications for the Indian plastics industry:

Key Implications

1. Compliance Pressure

- Rigid packaging must contain **30% recycled content by 2025–26**, rising to **60% by 2028–29**.
- Flexible and multilayered packaging also face mandatory recycled content quotas.
- Companies must embed **traceability tools (QR codes, barcodes)** to track plastic usage across the lifecycle. ➞ This forces producers, importers, and brand owners to overhaul supply chains and invest in recycling infrastructure.

2. Market Transformation

- Demand for **recycled resins (rPET, rHDPE, recycled PP)** will surge, creating new business opportunities for recyclers and technology providers.
- Traditional virgin polymer producers may face margin pressure as recycled content becomes mandatory.
- Export competitiveness will hinge on meeting global buyers' sustainability criteria, especially in Europe and North America.

3. Operational Flexibility

- India allows **carry-forward of shortfalls** for up to three years, easing the transition.
- This gives companies breathing space but also requires careful planning to avoid cumulative deficits.

4. Global Alignment

- India's rules converge with EU's PPWR and China's packaging standards, positioning Indian exporters better in global markets.
- Compliance will be seen as a **license to operate** internationally, especially in textiles, apparel, FMCG, and food packaging.

5. Innovation & Investment

- Push for **design for recyclability** and biodegradable alternatives.
- Likely increase in **joint ventures** between Indian firms and global recycling technology providers.
- Potential for **government incentives** to support recycling infrastructure and R&D.

Strategic Outlook

For Indian plastics exporters, these laws mean:

- **Short-term pain**: compliance costs, supply chain adjustments, and regulatory reporting.
- **Long-term gain**: stronger global positioning, access to sustainability-driven markets, and alignment with climate goals.

In essence, the industry is being nudged from a **volume-driven model** to a **value-driven, circular economy model**.