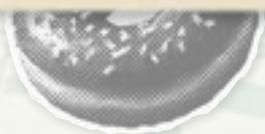




# Beyond Compliance : The Plastic Ban Playbook for Restaurants !



# About This White Paper

This white paper aims to support **the food and foodservice industry** in advancing its sustainability transformation. It focuses on key decision-making areas, including :

- plastic reduction and traceability policies
- strategies for sustainable operations



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# What Key Insights You Will Gain

- Global Policy Landscape & Compliance Requirements
- Comparative Evaluation of Straw Materials
- Quantified Environmental & Operational Impacts
- Compliance-Ready Certifications & Brand Benefits

## Three Immediate Actions You Should Take !



### 1. Audit Your Current Single-Use Materials

Review PLA, paper, and coated products for end-of-life impacts and potential PFAS or microplastic risks.

### 2. Establish Traceability and Compliance Requirements with Suppliers

Request ingredient origin, safety testing, and compliance documentation aligned with emerging traceability and due-diligence standards.

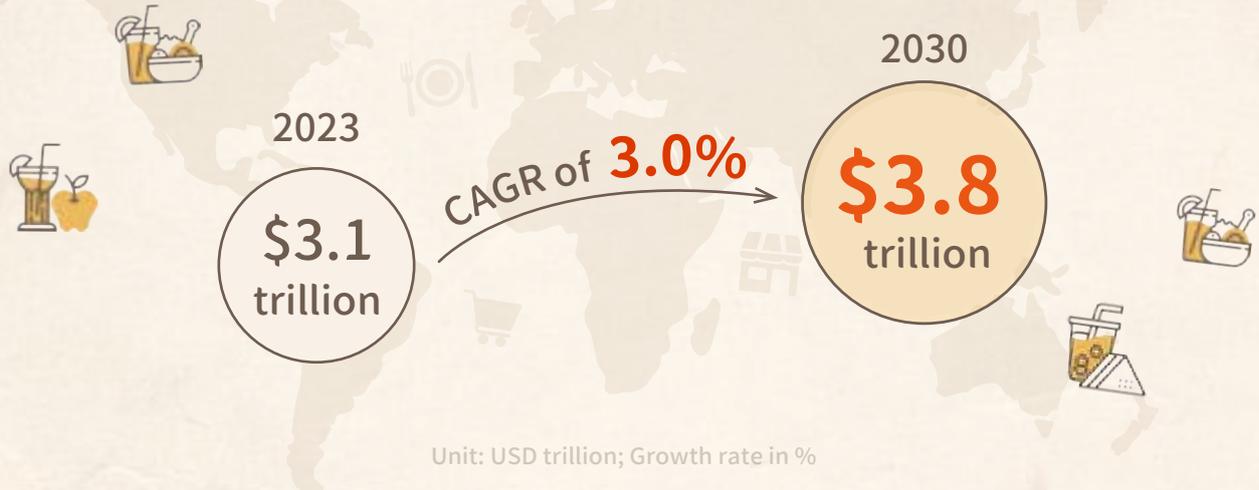
### 3. Begin Testing Natural, Additive-free Material Alternatives

Pilot Lepironia grass straws or other naturally compliant materials to prepare for stricter regulations and improve operational efficiency.



# Pushed by the Market, or Leading the Change?

According to Grand View Research “Foodservice Market, 2024–2030” ,  
the global foodservice market reached



As markets expand and regulations tighten, the foodservice industry faces unprecedented pressure to transform. From plastic reduction mandates and carbon disclosure requirements to supply chain due diligence, global sustainability frameworks are reshaping business models and brand strategies.

Sustainability actions not only strengthen brand trust and customer loyalty but also enhance pricing power and market resilience. By embedding sustainability across products, supply chains, and service experiences, companies can balance operational efficiency with social responsibility — achieving resilience across both economic and environmental dimensions.



# Green Alternatives : Driving Sustainable Transformation

## Connecting Carbon Reduction Actions with Consumer Trust in the Restaurant Industry.

To accelerate decarbonization and reduce environmental impact, major global economies are advancing plastic reduction initiatives within the restaurant industry. These efforts focus on controlling plastic and harmful chemical use at the source, while guiding end users toward **green and low-carbon alternatives**. Together, these measures are shaping a global trend that integrates **plastic reduction** with **material traceability**.



Selecting environmentally responsible products with genuine transparency and no hidden ingredients not only helps businesses reduce regulatory and testing risks but also strengthens their overall sustainability strategy. By embedding transparency and accountability into operations and brand values, companies can enhance consumer trust, reinforce their reputation for social responsibility, and ensure the long-term credibility of their sustainability commitments.

# Policy Starts with Producers — but Real Change Requires Active Participation from Users

Globally, around 400 million tons of plastic waste are generated each year, yet only 10% is recycled.

In the restaurant and foodservice industry, single-use items such as plastic bags, cutlery, and straws are among the primary targets of government plastic bans, given their high consumption and low recyclability.

Through **Extended Producer Responsibility (EPR)** frameworks, producers are now required to consider environmental impacts throughout the entire product life cycle.



Eco-design



Waste recycling



Circular Reuse

Research from the Organization for Economic Co-operation and Development shows that effective EPR programs can reduce :

municipal waste management costs by



..... **15~30%** .....



while improving collection rates by over 40%

# Global Response to Plastic Ban Regulations



Straw



Bowl



Plate



Cup

.....



and more

## Recycled Content Requirements

2025

Recycled content required in plastic packaging :

**20~30%**

2030

Recycled content target expected to increase under new regulations.

## Recycling Rate Targets

Phased Target | 2025 **65~77%** | 2030 **70~90%**

Most targets are set at the state level, but regulations are expected to tighten once elevated to national policy.



## Plastic Tax and EPR Implementation

Countries are reinforcing EPR schemes to drive plastic reduction and recycled material use.

The United Kingdom (from 2025) :

Plastic Packaging Tax on packaging with **<30% recycled content**, charged at **£217.85 per ton**.



# Reframing Sustainability in Foodservice : Building Low-Carbon Competitiveness

Restaurant sustainability is evolving from symbolic environmental pledges to actionable traceability and supply chain responsibility.

According to the Food and Agriculture Organization of the United Nations (FAO):

agriculture and food systems  ≈   roughly **1/3** of global greenhouse gas emissions

This underscores the foodservice sector's role in driving supply chain decarbonization.

Restaurant sustainability strategies are evolving from isolated green initiatives to **systemic transformation**—driven by data, traceability, and responsible supply chain governance.

By integrating transparent supply chain data and verifiable product traceability, and proactively disclosing life-cycle carbon footprints and emission reduction outcomes, companies can strengthen brand trust through transparency and accountability—while building verifiable, data-driven sustainability competitiveness.



# Product Traceability

Trace ingredient and packaging origins to link brand value with carbon performance.

| **United States: Food Safety Modernization Act – Section 204**  
Requires companies handling high-risk foods to establish comprehensive traceability plans. Although most restaurants are exempt, it is recommended that foodservice chains work with suppliers to ensure **batch-level product traceability**.



Leafy vegetables, seafood, dairy products, and others



| **European Union: EU Deforestation Regulation (EUDR)**  
Restaurant brands that import or use specific agricultural ingredients must obtain **geolocation traceability data** and a **due diligence statement ID** from their suppliers.



Coffee, cocoa, beef, palm oil, and other commodities



| **Australia: National Agricultural Traceability Strategy**  
Aims to develop a national agri-food traceability system to enhance export transparency and food safety assurance.



# Supply Chain Due Diligence

Ensure legal, transparent sourcing to enhance compliance and resilience.



## | European Union – Corporate Sustainability Due Diligence Directive (CSDDD)



Expected to take effect in 2026, the directive covers the food, agriculture, and restaurant sectors, requiring companies to identify and mitigate environmental and human rights risks across their supply chains.

| **United Kingdom & Germany – CMA Green Claims Code**  
Mandates that all environmental claims in the market be scientifically substantiated and verifiable. For the foodservice industry, this applies to sourcing statements, carbon footprint disclosures, and low-carbon menu labeling, **aiming to curb greenwashing practices.**



## | France – Duty of Vigilance Law 2023–2028

Requires large companies to assess and report supply chain risks. Multinational restaurant chains and ingredient suppliers must submit due diligence reports detailing how **environmental and social risks** are managed.

# Seeing the Big Impact from the Smallest Utensils!

With global bans on single-use plastic tableware, many restaurants have shifted to PLA or paper-based alternatives. Yet focusing only on plastic reduction — without evaluating the life-cycle impacts on carbon emissions, resource use, and the environment — can create a “plastic-for-plastic” gap, where substitution falls short of true sustainability.

For example, A leading fast-food chain, Brand S, operates over 400 locations across the United States. Based on an annual usage of 34 million paper straws, switching to Nature Straws could reduce:

Per Nature Straws  
can reduce



15.6g

CO<sub>2</sub> emissions



Reduction



530 MT

CO<sub>2</sub> emissions

1 MT

plastic waste



## Plastic 1.0 : PLA (Polylactic Acid)

From renewable crops such as corn, sugarcane, and cassava.

PLA decomposes only under **specific conditions above 58 °C**. In most cases, it is incinerated or landfilled, gradually breaking down into microplastics that return to the environment and food chain.

## Paper 2.0 : PFAS (Per/Polyfluoroalkyl Substances)

Commonly found in cookware and paper coatings, offering water-, oil-, and heat-resistant properties.

As “**forever chemicals**,” PFAS products are difficult to recycle and often incinerated or landfilled, posing health risks such as **hormone disruption, infertility, and cancer**.

## Plant 3.0 (Lepironia Grass)

Only plant-based hollow stems offer a truly **additive-free, non-toxic**, and environmentally neutral alternative.





# Sustainable Strategies

## Wonder Greener

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  - Efficient and Low-Impact Operations..... 16



### Certified & Trusted

- ★ SGS tested: **Free from PFAS**, pesticides & heavy metals.
- ★ EU REACH, Packaging Directive 94/62/EC,
- ★ EC No 1935/2004 compliant.
- ★ German LFGB food contact approved.

Make every choice  regenerate our planet.



# Lepironia articulata



Perennial aquatic species

Typically reaches 2–3 meters in height

## | Plant Characteristics

- **Hollow**, silica-rich stems with distinct nodes
- **Naturally water-resistant**, decay-resistant, and flexible
- Without the use of pesticides, herbicides, or insecticides

## | Distribution

Commonly found across **tropical and subtropical regions**, especially in Southeast Asia.

## | Sustainability Benefits

- Each plant can **sequester around 20 grams of carbon**
- Cultivation fields host twice the biodiversity of rice paddies



## Single-Use, Yet Truly Sustainable!

The Lepironia Grass Straw is made from the natural stems of native plants, without any chemical additives. It preserves the plant's inherent water resistance and flexibility, offering a pure and authentic sustainable solution.



# Brand consistency in dining detail

Gen Z consumers show greater willingness to pay for sustainable products. As prices adjust to reflect real costs, brands must enhance the dining experience and express authentic values to meet expectations—using social media to deepen engagement and strengthen brand influence.

- **Durable** : Lasts 8+ hours in hot or cold drinks.
- **Certified Safe** : Free from PFAS, heavy metals, pesticides.
- **Sparks photos, shares, and viral social buzz.**

## Single-use Convenience

Eliminates cleaning and hygiene concerns

## Brand Interaction

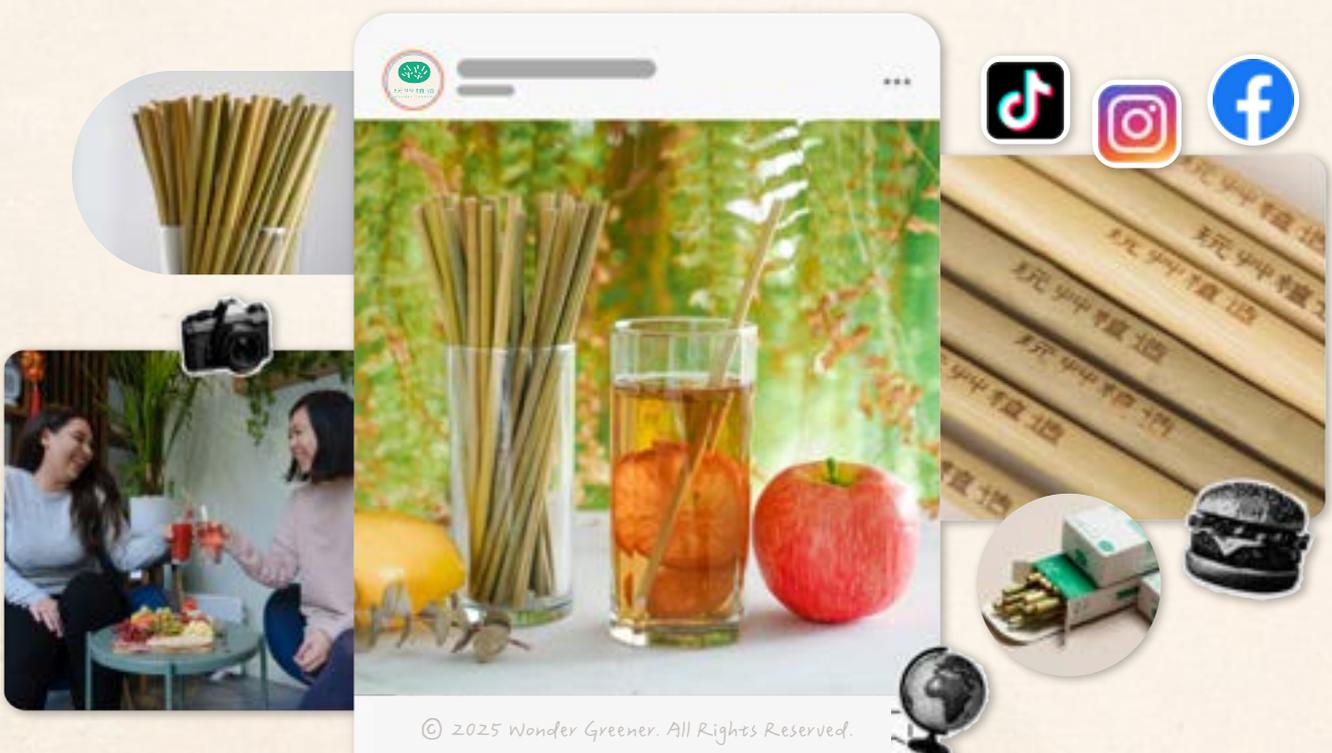
Sparks social engagement and discussion

## Custom Laser Engraving

Showcase your brand logo on each straw

## Unique Texture

Enhances brand distinction and dining experience



# We are Wonder Greener !

## The world's most sustainable straw

Our journey began with Lepironia grass—a natural, renewable material that embodies our commitment to sustainability. We continue to explore, collaborate, and innovate with like-minded partners across industries, believing that even the smallest utensil — the straw — can play a vital role in healing the planet with every use and choice.

Reusability is not the only path to sustainability. True environmental responsibility lies in materials and processes that are carbon-free and harmless to nature. The Grass Straw, made entirely from plant-based stems, represents the purest form of sustainable action—a single-use product that leaves no trace behind.



Make every choice ✦  
regenerate our planet.





Bar



Coffee Shop



Fast Food Chain



Daily Use

Canada  
United States

United Kingdom  
Germany  
France

Vietnam  
Singapore  
Australia

South Korea  
Japan  
Taiwan  
Hong Kong

## Effortless Disposal, Naturally

After use, Grass Straws can be disposed of together with food waste, requiring no additional sorting.

Like fallen leaves, they naturally decompose into water and nutrients in the soil, reducing both waste-handling time and operational workload for restaurant staff.



Optimize Waste Management



Enhance Operational Efficiency



玩中植造  
Wonder Greener

# Wonder Greener

Sustainability isn't  
complete without you!

| Restaurant Industry Series

- Efficient and Low-Impact Operations Guide
- Green Supply Chain Blueprint
- Building High-Trust Sustainable Brands



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