



9th ADVANCED GMP WORKSHOP 2024

Integrating Sustainability: The Next Frontier for Pharma

Geena Malhotra
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What is Sustainability in the Pharmaceutical Context:



Minimize environmental impact during drug production.



Focus on reducing carbon emissions, water, and energy usage



Use green chemistry and efficient manufacturing processes



Responsible sourcing of raw materials (e.g., excipients).



Reduce reliance on single-use plastics.

Sustainability – From Goal to Necessity

Driven by climate change, resource depletion, and environmental degradation.

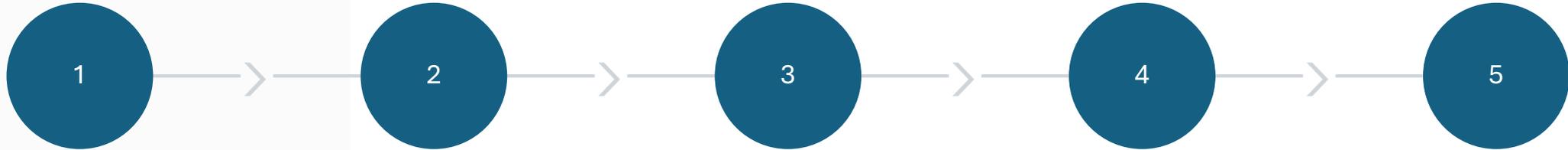
Global frameworks such as the UN SDGs and the Paris Agreement push for sustainable practices.

Industries, including pharma, are increasingly accountable for their environmental footprint.

India's Commitment to Sustainability

- Commitment to net-zero emissions by 2070.
- Reduce GDP emissions intensity by 45% by 2030 (from 2005 levels).
- Focus on increasing renewable energy and promoting sustainable industrial practices.
- Pledge to align with international agreements like the Conference of the Parties (COP) and Paris Agreement.

Regulatory Frameworks in India



SEBI's Business Responsibility and Sustainability Reporting (BRSR)

- Mandates sustainability disclosures for the top 1000 listed companies.
- Focus areas: Environmental Impact, Social Responsibility, Governance, Supply Chain Transparency, Compliance with Global Standards

Corporate Social Responsibility (CSR) Mandate:

- Large companies must allocate **2% of net profits** to CSR, often focusing on environmental and social initiatives.

Extended Producer Responsibility (EPR):

- Industries, including pharma, are obligated to manage and reduce waste, particularly packaging materials.

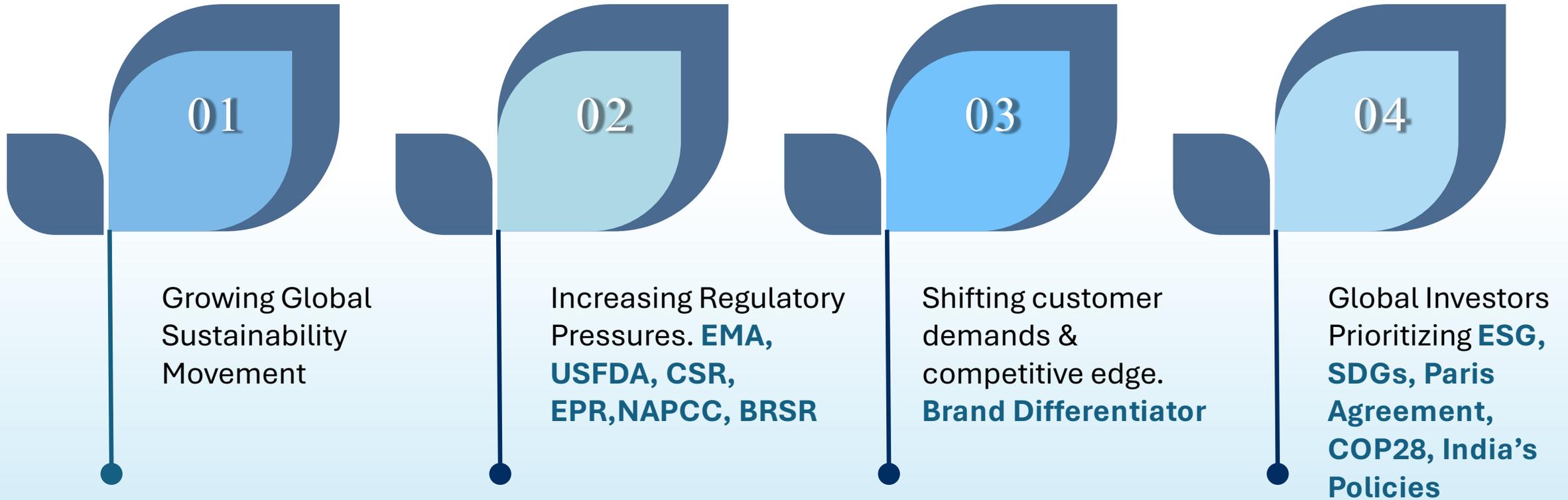
National Action Plan on Climate Change (NAPCC):

- Promotes sustainable development in sectors like energy efficiency, waste management, and eco-friendly raw materials

Sustainable Finance and Green Bonds Guidelines

Reflects **India's alignment with global climate efforts** under the COP process and the domestic pursuit of **Sustainable Development Goals (SDGs)**.

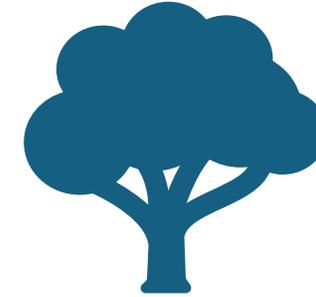
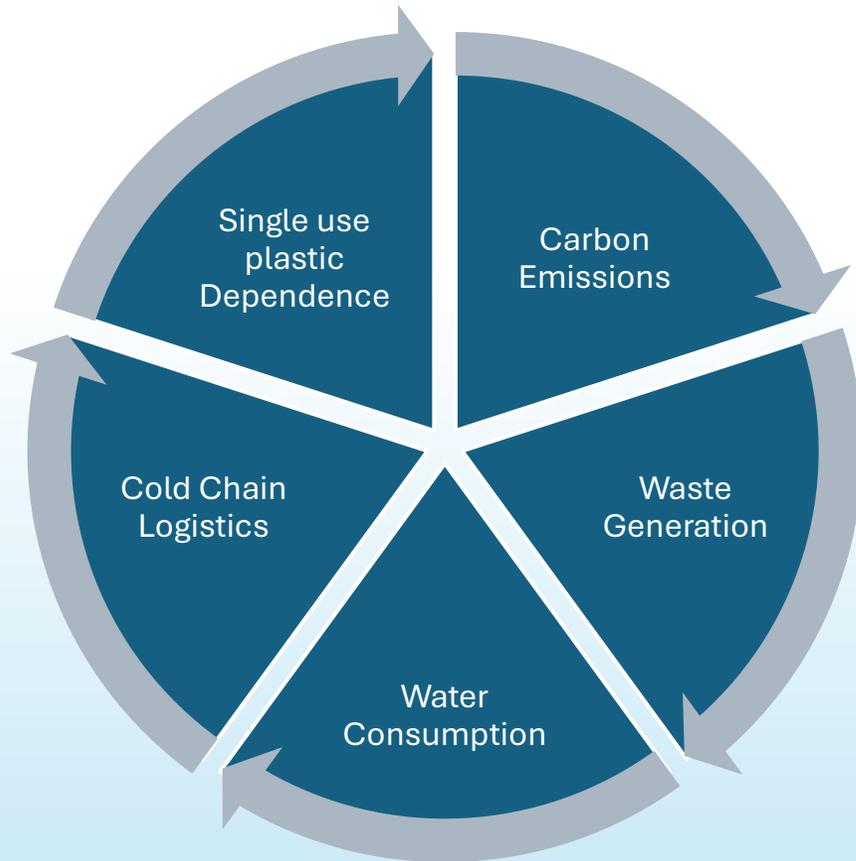
💡 Strategic Imperative for Pharma



* A 2022 McKinsey report noted that sustainability is now a key factor in long-term company value and that pharma companies investing in sustainability are more attractive to investors.

The Pharmaceutical Industry stands at a Critical Crossroad

Environmental Impact



Industry Initiatives

- **GSK** – Carbon Neutrality 2030
- **Cipla** – Zero Waste to Landfill
- **Cipla** – Water Stewardship (water neutrality 2025)
- **Baxter** – Recycled plastic packaging & takeback, safe disposal program



Sustainability as a Global Competitive Advantage

Global market expectations

- Companies with strong ESG policy better access to markets, tenders

Risk management

- Mitigate operational disruptions due to climate change, resource scarcity, and evolving regulations

Cost efficiency

- Optimization, waste reduction & efficiencies lead to long-term cost savings, improving financial performance.

Reputation & Branding

- Differentiation, positive brand image, attracts talent, and fosters trust with stakeholders

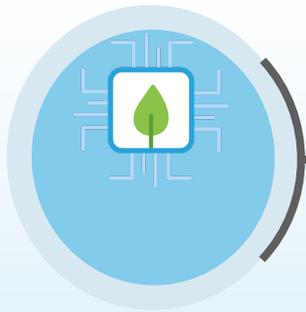
Ratings from DJSI, CDP & Ecovadis

- ESG principles helps reduce Scope 3 emissions, meeting climate goals and investor expectations

Innovations Driving Sustainability in Pharma

Innovative packaging and
container closure
systems

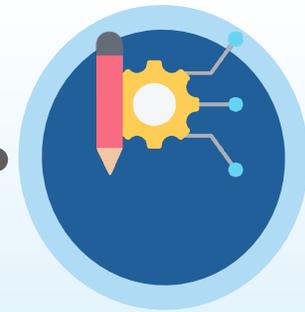
Reduced Material Usage
Through Design
Optimization



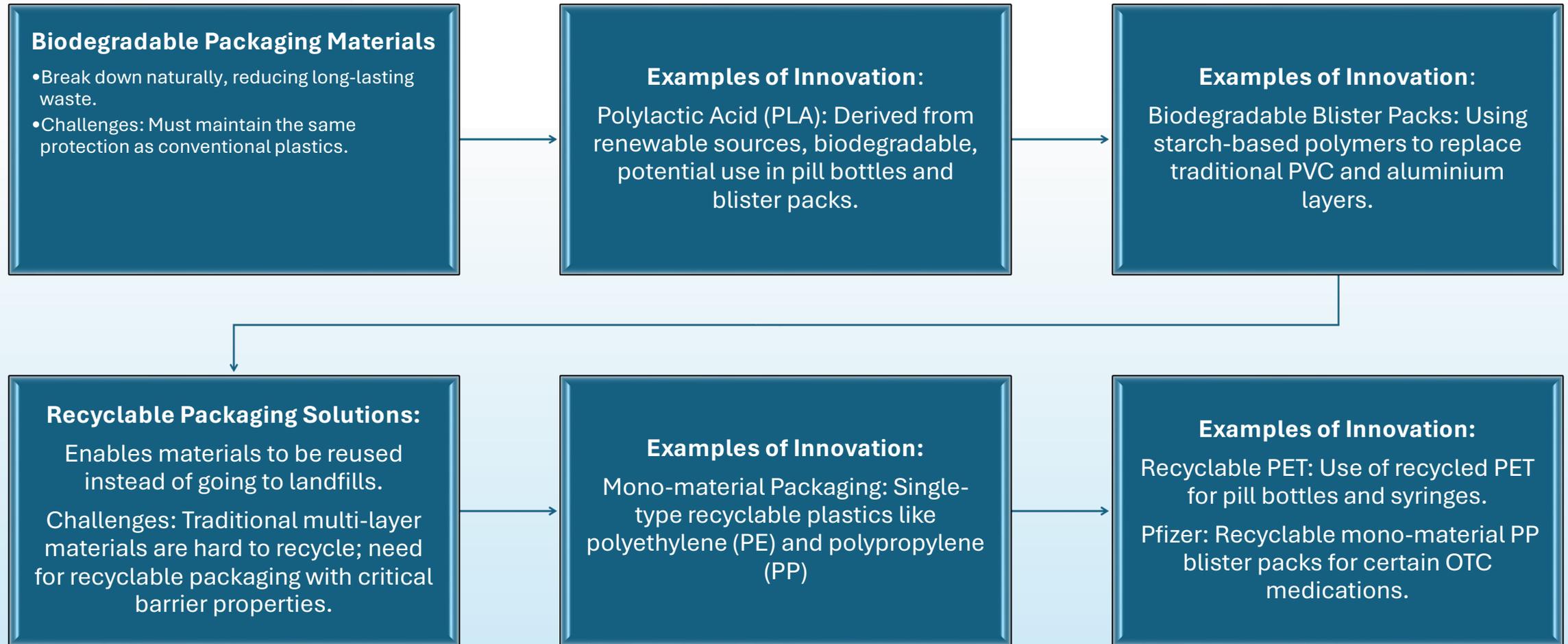
Sustainable
Technologies
and Processes



Recyclable and
Biodegradable
Packaging Solutions



Innovations in Sustainable Packaging Materials



Smart and Optimized Packaging Technologies

Smart Packaging Technologies

- Combines sustainability with innovations for traceability and quality monitoring

Examples of Innovation:

- Edible Sensors: Biodegradable sensors for monitoring temperature and humidity without adding waste.
- Aptar Pharma's Smart Packaging: Eco-friendly inhaler packaging with connectivity features for drug delivery monitoring.



Reduced Material Usage Through Design Optimization:

- Lightweighting packaging to use less material while maintaining protection

Examples of Innovation:

- Thinner, Stronger Films: Less plastic, same protective properties
- Compact Packaging Design: Reduces material, improves efficiency
- Sanofi: Optimized packaging design, reducing material weight up to 20%

Benefits of Partnering with Right Excipient Suppliers



1. Innovation in Sustainability:

- Green chemistry and sustainable manufacturing.
- Improved environmental performance and product quality



2. Reduced Environmental Impact:

- Sustainable raw materials.
- Carbon reduction in production
- Energy-efficient technologies.



3. Regulatory Compliance:

- Vendors adhering to global ESG standards.
- Ensures compliance and reduces penalties.



4. Ethical Supply Chain:

- Ethical labor practices and fair wages.
- Builds trust and meets social responsibility goals.



Sustainable Supply Chain Management



Transparency and Accountability

Track and measure suppliers' adherence to ESG standards, encouraging continuous improvement and responsible business practices



ESG Risk Mitigation

Prioritizing ESG factors in vendor selection and monitoring, companies can reduce the risk of supply chain disruptions



Sustainable Sourcing

Engaging with vendors committed to ESG principles allows companies to ensure that their supply chain aligns with sustainability goals



Innovation and Efficiency

Collaborating with vendors to implement sustainable practices drives innovation and efficiency improvements



Enhanced Reputation

Partnering with vendors that uphold ESG principles enhances the company's reputation as a socially responsible and environmentally conscious organization

Evaluating Vendor's ESG Commitments

A sustainable supply chain is essential for a company's overall sustainability strategy, focusing on procurement, logistics, and waste reduction.

Key Vendor Evaluation Questions:



Environmental Sustainability:

What steps are you taking to reduce your carbon footprint?

Do you practice sustainable sourcing of raw materials?

How do you manage waste and resource consumption?



Social Responsibility:

What labor standards and fair wage policies do you follow?

What health and safety practices are in place for workers?

Do you have diversity and inclusion initiatives?



Governance and Transparency:

How do you ensure compliance with environmental and social regulations?

Can you provide ESG reports or certifications (EcoVadis, CDP)?

What innovations minimize environmental impact?

Do you have a roadmap for achieving net-zero emissions?

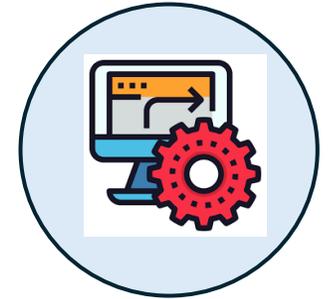
Actionable Steps for Pharma Companies



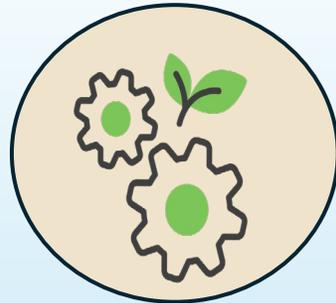
Perform sustainability audits.



Collaborate across the supply chain.



Automation & AI



Invest in greener technologies.



Engage with stakeholders on sustainability goals.

Thank You