INDUSTRY PERSPECTIVE ON SINGLE USE PLASTIC

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Immediate Past President, AIPMA
Present Status

• **Current Industry Size** - Rs. 100,000 Cr Industry with 13.4 MMTPA growing @ 10.5% (CAGR) to reach 22 MMTPA by 2020.

• **Strength of Industry** - Active 50,000 Processors, 7500 Recyclers

• **Means of Disposal** - 60% plastic is recycled, need to effectively dispose balance.

• One of the fastest growing industries in the Indian economy.
The Issue on hand

Is plastic the problem
or
Is it plastic pollution

Eye sore in the environment
Plastics in the Ocean
Plastics in the landfill
Perception

USA

INDIA
The English-speaking world's growing concern for the environment and the ubiquity of disposable items that are used only once has pushed the word "single-use" to the top of Collins Dictionary's list of "Word of the Year."

Collins says there's been a fourfold increase in the usage of the word since 2013, in part thanks to news coverage of environmental issues.
Single use plastics

• *(According to UN Environment Report)* Single-use plastics, often also referred to as disposable plastics, are commonly used for plastic packaging and include items intended to be used only once before they are thrown away or recycled. These include, among other items, grocery bags, food packaging, bottles, straws, containers, cups and cutlery.

• Copying blindly the UN report, will only hamper Indian plastic industry and economy adversely.

• A proper definition and collation of plastics need to be done by MoEF&CC / DCPC.
Significance of a product

- Functionality
- Convenience
- Food safety
- Health safety
- Environmental impact LCA/EIA
- Social Impact
- Economical impact /Resource Efficiency
- Consumer Preference
- Carbon footprint
What really matters

• Consumer Behaviour
• Convenience
• Affordability
• Small Sizes
Cutlery – Spoons, Dishes, Plates, Cups, Glasses

Environmental Impact

Functionality

Economical Impact

Convenience

Social Impact

Food and Health safety

Scale
High – 70 and above
Medium – 40-60
Low – 10-40
Negligible – 0-10
Plastic Carry Bags < 50 microns (<20gms)

Environmental Impact

Functionality

Convenience

Economical Impact

Social Impact

Food and Health safety

Scale
High – 70 and above
Medium – 40-60
Low – 10-40
Negligible – 0-10
Mineral Water Pouches

- Mineral Water Pouches
- Environmental Impact
- Functionality
- Economical Impact
- Convenience
- Social Impact
- Food and Health Safety

Scale
High – 70 and above
Medium – 40-60
Low – 0-40
Negligible – 0-10
Non-woven bags (with or w/o handles)

Scale
- High – 70 and above
- Medium – 40-60
- Low – 10-40
- Negligible – 0-10
Plastic Sheets (Cling film, Strech film for wood wrappers)

- Plastic Sheets

Environmental Impact
- 70
- 60
- 50
- 40
- 30
- 20
- 10
- 0

Functionality
- 40

Economical Impact

Convenience

Social Impact

Food and Health safety

Scale
- High – 70 and above
- Medium – 40-60
- Low – 10-40
- Negligible – 0-10
Aggressive stand on Bubble wrap

- Flexible packaging material which wraps around the product of intricate shape and it gives the best cushion protection from damage.
- Multi segment applications
Statistics

- No of units in India: 70
- Material Converted: 40-50,000 M tons
- Employment directly: 1500-2000
  - Indirect: >3000

Turnover: >500 CR
Revenue for state: 100 CR
PWM Rules, 2016 and Amendment Rules, 2018

- PWM - The responsibility of a producer for the environmentally sound management of the product until the end of its life
- Objective: To give thrust on plastic waste minimization, source segregation, recycling, involving waste pickers, recyclers and waste processors in collection of plastic waste fraction either from household or any other source of its generation or intermediate material recovery facility and adopt polluter’s pay principle for the sustainability of the waste management system.
- Plastic sheet or like, which is not an integral part of multi-layered packaging and cover made of plastic sheet used for packaging, wrapping the commodity shall not be less than fifty microns in thickness except where the thickness of such plastic sheets impair the functionality of the product.
- A Value chain for non recyclable plastics is to be established. As per CPCB Consolidated Guidelines for collection, segregation and disposal of plastic waste the sustainable Methods have been prescribed for non recyclable plastics.

*Plastic Waste Management Notification 2016 and 2018 do not consider general ban on plastic packaging*
## GDP Growth: Strong Relation to Petrochemical Growth

<table>
<thead>
<tr>
<th>Year</th>
<th>GDP Growth</th>
<th>Polymer Consumption Growth</th>
<th>Import Duty</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990-1995</td>
<td>5.0%</td>
<td>12.9%</td>
<td>50%+</td>
</tr>
<tr>
<td>1995-2000</td>
<td>6.5%</td>
<td>14.6%</td>
<td>40%</td>
</tr>
<tr>
<td>2000-2004</td>
<td>5.9%</td>
<td>5.8%</td>
<td>45%-15%</td>
</tr>
<tr>
<td>2005-2012</td>
<td>8.7%</td>
<td>10.9%</td>
<td>12.5%-5%</td>
</tr>
<tr>
<td>2012-2017 12th plan</td>
<td>7.2%</td>
<td>10.6%</td>
<td>7.5%-5%</td>
</tr>
<tr>
<td>2017-2022 13th plan</td>
<td>8%</td>
<td>10.4%</td>
<td>5%-0%</td>
</tr>
</tbody>
</table>
If plastic waste is not treated, make 5 years plan for collection/ segregation and disposal

Urban Local Bodies have to come out with collection and segregation plan of plastic waste with the help of involved stakeholders and associations.

Association will be willing to work with Government

AIPMA recommends yearly increase in collection / segregation as follow:

- 2020 – 20%
- 2022 – 50%
- 2024 – 80%
- 2026 – 100%
Opportunity with Plasticulture

• Following are the opportunities that the agriculture sector has with enhanced usage of Plasticulture applications:
  • Yield improvement upto 50-60%
  • Water savings upto 60-70%
  • Prevention of weeds growth
  • Soil conservation
  • Protection against adverse climatic conditions
  • Fertilizer savings upto 30-40%
  • Reduction in post-harvest losses
  • Conversion - cold desert/wasteland for productive use

• The greater use of plastic in agriculture can also help to a great extent to achieve up to fifty percent of the intended targets in Agriculture.
The following are the End of Life solutions for plastics:

• Converting Plastic Waste into Polyfuel which is a high calorie fuel which is an alternative to Kerosene
• Converting Plastic Waste into fertilizer which increases the yielding capability of crops
• Converting Plastics into Electricity which is a good option for our country with scarcity of electricity
• Plastic waste added to bitumen in road construction has proved to extend life of road and improve quality
• Using Plastic Waste as additive to furnaces in cement kiln and power plants should be mandated
• If mandated and implemented properly, there will be a huge demand for plastic waste and improve recycling industry
### SUMMARY OF COUNTRIES THAT HAVE INTRODUCED REGULATIONS ON PLASTIC BAGS AND STYROFOAM PRODUCTS

<table>
<thead>
<tr>
<th>Type</th>
<th>Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BAN - ENTERED INTO FORCE</strong></td>
<td>Benin, Burkina Faso, Cameroon, Cape Verde, Chad, Cote d Ivoire, East Africa, Egypt, Entea, Ethiopia, Gambia, Guinea-Bissau, Kenya, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Niger, Rwanda, Senegal, Somalia, Tanzania, Uganda, Bangladesh, Bhutan, India, Mongolia, Myanmar, Pakistan, Philippines, Sri Lanka, Antigua and Barbuda, Argentina, Belize, Chile, Ecuador, Guatemala, Guyana, Haiti, Honduras, Panama, St. Vincent and the Grenadines, France, Canada, Australia, Papua New Guinea, Vanuatu, Mrshall Islands, Palau,</td>
</tr>
<tr>
<td><strong>LEY - ENTERED INTO FORCE</strong></td>
<td>Botswana, Indonesia, Taiwan, Vietnam, Brazil, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Greece, Ireland, Latvia, Lithuania, Malta, Netherlands, Portugal, Romania, Slovakia, Sweden, United Kingdom, Fiji</td>
</tr>
<tr>
<td><strong>BAN &amp; Levy - ENTERED INTO FORCE</strong></td>
<td>South Africa, Tunisia, Zimbabwe, China, Israel, Malaysia, Colombia, Mexico, Belgium, Italy, Spain, United States of America</td>
</tr>
</tbody>
</table>
National level plastic bag bans and Styrofoam regulations

- Total or partial ban
- Economic instruments
- Combination
- Private public agreement
## Ban and its impact in India

<table>
<thead>
<tr>
<th>City</th>
<th>Ban on Plastic Products</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Himachal Pradesh</td>
<td>Non-biodegradable plastics Bags and Disposable plastic products</td>
<td>Significant decrease in plastic pollution</td>
</tr>
<tr>
<td>Karnataka</td>
<td>Plastic bags</td>
<td>Plastic bags continue to be both available and commonly used</td>
</tr>
<tr>
<td>Punjab</td>
<td>Single-use plastic carry bags and containers</td>
<td></td>
</tr>
<tr>
<td>Haryana</td>
<td>Plastic Carry bags</td>
<td>Limited because of poor enforcement</td>
</tr>
<tr>
<td>Kerala</td>
<td>Plastic bags &lt;50μ</td>
<td></td>
</tr>
<tr>
<td>West Bengal</td>
<td>Plastic bags &lt;40μ and blanket ban in certain areas</td>
<td>Plastic bags are still commonly used. Implementation is limited</td>
</tr>
<tr>
<td>Sikkim</td>
<td>Plastic wrappers, plastic bags and disposable Styrofoam</td>
<td>Although plastic bags are still common (used by 34% of shops) the majority switched to paper bags or newspaper (66%)</td>
</tr>
<tr>
<td>Delhi</td>
<td>Ban on all kinds of disposable plastics</td>
<td>Limited because of poor enforcement.</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>Plastic carry bags, PET bottle (less than 200 ml), Disposable items, Decoration Item</td>
<td></td>
</tr>
</tbody>
</table>
IRELAND

- **Action taken** - In 2002 - Introduced a tax on plastic bags at points of sale, known as the “PlasTax”. The levy was set six times higher than the estimated willingness to pay. Aim to trigger behaviour change in consumers. Tax did not apply to small so-called knot bags for hygiene purposes.

- **Impact** - Within one year from the introduction of the tax, the use of plastic bags in Ireland dropped by more than 90%. Likewise, while prior to the 2002 levy, plastic bags accounted for 5% of the national waste, in 2004 this number fell to 0.22%, with a strong perception among surveyed households of the positive effects of the levy on the environment.

- **Learnings** - The success of the Irish levy on plastic bags demonstrates that the adoption of a sufficiently high levy can influence consumer behaviour. Furthermore, it proves that stakeholder buy-in and wider public acceptance are essential for the successful implementation of such a policy tool. Extensive consultation and awareness campaigns on the environmental impacts of plastic bag litter were of utmost importance. Clear division of roles and responsibilities among local authorities were key for good governance and, regular monitoring and review of the tax ensured its continued effectiveness.
Case Studies

South Africa

- **Action Taken** - In 2003, the Government of South Africa introduced a ban on single-use plastic bags less than 30 microns thick. The new regulation was combined with a nominal levy on retailers. After only three months the levy was reduced to partly because of the pressures from plastic-bag producers.

- **What didn’t work so well**
  - The levy on plastic bags affected the food sector but excluded other industries, such as clothing retailers, which still gave out free plastic bags. The levy on plastic bags seemed to be particularly problematic for poorer segments of the population, which use plastic bags as cheap means to carry goods over long distances. Despite the initial success, with little to no consultation with stakeholders and no awareness raising on why the levy was being implemented, consumers started to budget the small charge for plastic bags into their shopping, and the number of bags consumed slowly returned to pre-levy levels.

- **Lessons learned**
  - The mix of policy tools implemented in South Africa, albeit initially successful in reducing the demand for plastic bags, had diminishing effects over the longer term due to limited consultations with and awareness of the stakeholders. The (too) small nominal levy on retailers did not prompt the desired change in consumers’ behaviour, suggesting that people have become habituated to paying for plastic bags. It remains unclear if any part of the revenues collected from the levy are utilized for the benefit of the local waste and recycling sector.
EU PROPOSALS

• **Plastic ban of certain products:** Where alternatives are readily available and affordable, single-use plastic products could be banned from the market. The ban could be applied to plastic cotton buds, cutlery, plates, straws, and drink stirrers which would all have to be made exclusively from more sustainable materials instead. Single-use drinks containers made with plastic could only be allowed on the market if their caps and lids remain attached;

• **Consumption reduction targets:** States would reduce the use of plastic food containers and drinks cups. They can do so by setting the reduction targets, making alternative products available at the point of sale, or ensuring that single-use plastic products cannot be provided free of charge;

• **Obligations for producers:** Producers would help cover the costs of waste management and clean-up, as well as awareness raising measures for food containers, packets and wrappers (such as for crisps and sweets), drinks containers and cups, and lightweight plastic bags. The industry could also be given incentives to develop less polluting alternatives for these products;

• **Collection targets:** States could be obliged to collect 90% of single-use plastic wastes by 2025, for example through deposit refund schemes;

• **Labelling Requirements:** Certain products would require a clear and standardized labelling which indicates how waste should be disposed, the negative environmental impact of the product, and the presence of plastics in the products;

• **Awareness-raising measures:** States could be obliged to raise consumers' awareness about the negative impact of littering of single-use plastics as well as about the available re-use systems and waste management options for all these products.
Priority actions to minimize single-use plastics

1. **Improve waste management systems**
   - Segregation of waste at sources: plastics, organic, metals, paper, etc.
   - Effective collection of the segregated waste, transport and safe storage
   - Cost-effective recycling of materials (including plastics)
   - Less land filling and dumping in the environment

2. **Promote eco-friendly alternatives to phase out single-use plastics**
   - Introduce economic incentives including tax rebates, research and development funds, technology incubation support, public-private partnerships
   - Support projects to upscale or recycle single-use items transforming potential wastes into a resource
   - Stimulate creation of micro-enterprises to drive job creation and economic growth

3. **Educate consumers to make environmentally friendly choices**
   - School education incorporated in curriculums
   - Awareness campaigns
   - Public pressure to drive public and private sector decisions

4. **Enable voluntary reduction strategies**
   - Reduction strategies can lead to fostering the understandings of people, without the forced sudden change.
   - Promotion and adoption of reusable bags as alternatives to plastic bags
   - Voluntary agreements between government and retailers/producers
   - Existence of the raised social awareness and the public pressure would be a pre-condition for the effective reduction strategies.

5. **Ban or introduce levies on the use and sale of single-use plastic items**
   - Example of policy tools:
     - **Regulatory instruments**: Ban, levy on suppliers, levy on retailers
     - **Economic instruments**: Levy on consumers
     - **Combination of Regulatory and Economic instruments**: Ban and levy, extended producer responsibility
In Conclusion

• The industry is aligned towards Environment protection.

• Phasing out and Banning of specific products/group of products should be considered only after due process to understand 360 degree view.

• Emphasis should be on practical execution towards solution.

• Stake holders across value chain have to contribute towards successful implementation.
Plastic Serves
Littering Pollutes
Segregate the waste
Bless Plastics
Ban Littering
Little girl showing her new plastic foot. Plastic brings purpose to life. Pure Happiness.