SINGLE-USE PLASTICS
A Roadmap for Sustainability

Fact-sheet for Policymakers

Photo credit: londonista_londonist/Flicker.com
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Although there are some successful initiatives that aim to tackle other types of single-use plastics, the recent drive for action by governments largely focuses on plastic bags and, to a certain extent, foamed plastic products.

Since the 1950s, the production of plastic has outpaced that of almost every other material.

World plastic production in 2015: 400 million tonnes, 36% of which is plastic packaging.

Total Plastic packaging waste in 2015: 141 million tonnes.

What happens to plastic waste?

Disposal of all plastic waste ever produced as of 2015:

- 9% recycled
- 12% incinerated
- 79% landfills, dumps or in the environment

Problematic single-use plastics

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Why plastic bags and Styrofoam products?

Plastic bags and foamed plastic products seem to be perceived by governments as the most problematic single-use plastics, given their easily observable presence (as an eyesore) in the environment, such as windblown bags clinging onto fences or trees or floating in rivers.

Some of the characteristics that make them commercially successful – price, durability and resistance - also contribute to making them environmentally unsound (when mismanaged) and difficult to recycle.

1-5 trillion plastics bags are used worldwide each year.

Impacts of mismanaged single-use plastics

Cost of inaction: If we don’t improve our consumption patterns and waste management practices, by 2050 there will be around 12 million metric tonnes of plastic litter in landfills and in the environment.

- Contaminates soil and water
- Choke waterways and exacerbate natural disasters
- By 2050, an estimated 99% of seabirds will have ingested plastic
- Cause economic loss in tourism, fishing and shipping industries
- High cost of transport to centralized plant of lightweight foamed plastics due to difficulty in recycling at local plants
- Future costs of removal of accumulated plastic litter in the environment
- Block sewage systems and provide breeding grounds for mosquitoes, raising the risk of malaria transmission
- Release toxic chemicals and emissions if burned Welfare losses (visual pollution)
- Food chain contamination

Environmental Impacts

Economic Impacts

Health Impacts
## 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 landfiling 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

<table>
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<th>Example of policy tools</th>
<th>Ban</th>
<th>Levy on suppliers</th>
<th>Levy on retailers</th>
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<tr>
<td>Regulatory instruments</td>
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<td>Economic instruments</td>
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<td>Combination of Regulatory and Economic instruments</td>
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### National level plastic bag bans and Styrofoam regulations

- Total or partial ban
- Economic instruments
- Combination
- Private public agreement
Estimated number of new regulations on single-use plastics entering into force at the national level worldwide

No to little impact 20%
Reduced consumption or less pollution 30%
No data on impact 50%

Impact of national bans and levies on plastic bags
(based on more than 60 countries experience)

What about biodegradable plastic items?

Many governments outlawed conventional plastic bags, allowing only the use and production of "biodegradable" bags.

Better waste management systems to limit leakage and damage to the environment is as relevant for fossil-fuel based plastics than for biodegradable plastics.

"Biodegradable" plastic items often do not degrade automatically in the environment and especially not in the ocean. They require exposure to prolonged high temperatures, above 50°C. Such conditions are met in incineration plants, but very rarely in the environment.

Case studies in the publication

EUROPE:
Ireland ( levy on consumers)
Austria (voluntary public-private agreement)

AFRICA:
Rwanda (total plastic bag ban)
South Africa (combined ban and levy on retailers)
Kenya ( punitive total ban)

ASIA:
China (national and provincial bans and levies)
Bangladesh (how social pressure and disaster management can lead to banning)
India (public action as driver of change)

AMERICAS:
New York City (Styrofoam ban)
Costa Rica (total single-use plastic ban)
Bans in the Caribbean Region (Antigua and Barbuda, Aruba, Bay Islands Honduras)
Roadmap for policymakers

The 10 steps to consider when introducing bans or levies on single-use plastics

1. Know the baseline
   - Identify the most problematic single-use plastics
   - Assess current causes
   - Assess extent
   - Assess impacts
   - Evaluate consumers’ willingness to pay

2. Evaluate possible actions
   - Regulatory
   - Voluntary
   - Economic
   - Combination

3. Assess impacts of preferred option
   - Social
   - Economic
   - Environmental

4. Engage stakeholders
   - Government (central and local)
   - Industry
   - Retailers
   - Waste management authority
   - Citizens
   - Tourism associations

5. Raise awareness
   - Education programmes
   - TV adverts
   - Campaigns to explain:
     - Why is the policy being introduced?
     - What are the expected benefits?
     - Are there punitive measures?

6. Promote alternatives
   - Eco-friendly
   - Affordable
   - Fit for purpose

7. Incentivize industry
   - Allow enough time for the transition
   - Offer tax rebates
   - Keep certain eco-friendly materials tax-free

8. Ringfence revenues
   - In order to support:
     - Waste minimization
     - The recycling industry
     - Environmental projects and to finance awareness initiatives
   - Communicate the chosen purpose!

9. Enforce
   - Set roles and responsibilities
   - Ensure sufficient human-power for enforcement
   - Communicate the enforcement process
   - Prosecute offenders in line with policy revisions

10. Monitor and adjust policy
    - Audits
    - Surveys
    - Studies and interviews
    - Keep the public updated on progress!

Transitioning to more eco-friendly alternatives can be a lengthy process. In the meantime, strengthening circular thinking and waste management systems can successfully help in reducing plastics pollution.