

Turning off the Tap: Key messages

[Turning off the Tap: How the world can end plastic pollution and create a circular economy](#), is a solutions-focused report, offering concrete practices, market shifts and policies. It is published ahead of a [second round of negotiations](#) on a legally binding instrument to end plastic pollution. It aims to strengthen the understanding of the magnitude and nature of the change required in the plastics economy to achieve this goal.

This report provides a “compass” for governments and an action plan for businesses to end plastic pollution by 2040:

- Slashing plastic pollution by 80%.
- Halving single-use plastics production.
- Net-saving and avoided externalities of USD 4.5 trillion by 2040.
- Creating 700,000 jobs, mostly in low-income countries.
- The compass relies only on technologies and solutions that already exist but requires urgent simultaneous action across borders. A five-year delay in executing the necessary shifts mean higher costs and additional 80 million metric tons of plastic pollution by 2040.
- An integrated approach to regulatory instruments and policies tackling actions across the life cycle is crucial as these then reinforce each other towards the goal of transforming the economy:
 - Reducing the size of the problem by eliminating unnecessary and problematic plastic uses.
 - Three market shifts –reuse, recycle, and reorient and diversify.
 - Dealing with plastic’s legacy that can’t be eliminated, reused, recycled, or replaced.
- For each necessary shift (reuse, recycle, reorient and diversify), the report accounts for likely implications on polymer and chemical producers, plastic converters, brands/manufacturers, retailers, governments, consumers, waste pickers, waste management companies, and recycling companies.

Reuse:

- Elimination of problematic and unnecessary plastics, as well as reuse and new delivery options, are effective interventions, as they reduce waste at the source.
- Reuse options include refillable bottles, reusable bags, bulk dispensers in-store and in retail, deposit-return schemes, packaging take-back schemes, washing and

repair, food containers and bags, low-packaging subscription services, and concentrated product capsules.

- Boosting the market for reusable and refillable products instead of a throwaway economy means ensuring the reuse market has a stronger business case than the single-use plastic products market.
- This is the most powerful market shift, which can reduce 30 per cent of plastic pollution by 2040.
- Reuse and new delivery models are highly economical schemes, estimated to generate net savings of USD 1,289 per ton of plastic for reuse schemes and USD 516 per ton of plastic for new delivery models.
- Reuse solutions for short-lived plastics are already technologically available, though investment is required to support the transition to an economy that maintains products at their highest possible value.
- Targets embedded in legislation (such as France's Anti-Waste Law, 2021), collection points, return incentives, reverse logistics (including washing and sanitation), labelling and communication, can assure the market when considering investments into reusable products and delivery.
- Similar policies are to be taken across countries to allow for an economy of scale, easing businesses' shift from a throwaway to a circular economy.

Recycle:

- Ensuring recycling becomes a more stable and profitable venture could reduce the amount of plastic pollution by an additional 20 per cent by increasing the share of economically recyclable plastics from 21 per cent to 50 per cent by 2040.
- Design rules would result in the removal of all dyes, pigments and additives that interfere with recycling economics; homogenize plastic types and formats; design-out and/or ban hard-to-recycle and problematic polymers; increase post-consumer recycled content in all new products; eliminate hazardous chemicals; standardizing and enhancing labelling to improve waste sorting.
- Removal of subsidies for fossil fuels, currently used to make virgin plastics cheaper than recycled materials, would level the playing field for recycling.
- Including criteria for a minimum recycled content in public procurement or long-term offtake contracts would guarantee demand for recycled polymers.
- Improved waste collection systems would be required to facilitate the shift to increased recycling.
- Mechanical recycling is preferred in terms of costs and emissions. Nevertheless, chemical recycling would be needed for about 5 per cent of the plastics volume in short-lived products by 2040, which cannot be recycled mechanically.
- Mexico is an example of a country where the enabling environment successfully incentivized investment in recycling, resulting in its increased rate from 8.8 per cent in 2002 to 56 per cent in 2018.

Reorient and diversify:

- Careful replacement of products such as plastic wrappers, sachets and takeaway items with products made from alternative materials (paper, compostable materials, recycled plastic, etc.) is an opportunity for innovation and economic development that can deliver a 17 per cent decrease in plastic pollution.
- Deployment of alternatives to plastics should always be backed by life-cycle assessment studies to verify if alternatives are superior to plastics they replace.

Addressing plastic pollution legacy:

- Though simultaneously shifting to reuse, recycle, and reorient would result in an 80 per cent decrease in plastic pollution, action will still be required to manage 100 million metric tons of plastics from short-lived products annually, by 2040: that is equivalent to almost equal in weight to five million shipping containers, which – placed end to end – would stretch for 30,000 km or about a return trip from New York City to Sydney.
- **Microplastics**, mostly from tyres, pellets, textiles, and personal care products, can be addressed by reducing automotive mileage, redesigning tyres and behavioural change, improved design and production of garments, introducing filters on washing machines, improved production and value chains of plastic pellets and facilitating their safe transport, and banning the use of intentionally added microplastics to personal care products.
- **'Ghost gear'** or abandoned, lost and discarded fishing gear – fishing nets, lines, ropes and abandoned vessels – may cause at least one per cent of total plastic pollution. Solutions require a coordinated effort to stop pollution at its source while improving waste management and recovery in the environment.
- **Disposal solutions** remain a better option when compared to open burning: a ton of plastic waste ending in an incineration plant emits around 20 per cent less GHG than if the same ton is burnt in the open.
- Engineered landfills are the most cost-effective waste disposal method. However, microplastics can percolate into the environment, even in highly sanitary landfills.
- The costs undergone in their production are lost to the economy when plastics are landfilled. They also take significant space, often near urban centres.
- While disposal of waste in the country where waste is generated is preferred, exports of plastic waste between neighbouring countries that is non-mixed and non-contaminated is not discouraged if Prior Informed Consent is followed.
- National government should consider taking responsibility for waste management.

Jobs:

- By 2040, a shift to a circular plastics economy would result in 700,000 more jobs than if we maintain business-as-usual.
- The poor in low-income countries would be the primary beneficiaries from new jobs directly associated with short-lived plastics: collection, sorting, recycling, reverse logistics, washing of reusables and reuse are all more labour-intensive than mechanized production of new plastic.

- In a 'just transition' to a greener and inclusive economy, highly skilled workers in virgin plastic production and in the conversion of plastic products are likely to find alternative jobs in the new circular economy/ elsewhere.

Financing:

- Overall, the required systemic change results in USD 1.27 trillion in savings considering investment, operations and management costs and recycling revenues. A further USD 3.25 trillion is saved from avoided externalities.
- Investment and financing for operational costs required under the systems change are lower than in business-as-usual but they will present some challenges, such as high upfront capital required. Interventions will be needed, for instance to ensure that the transition is economically and financially viable for all actors involved.
- Much of the necessary investment can be mobilized by shifting planned investments for new plastic production facilities (no longer needed through reduction in material needs) into the necessary circular infrastructure.
- The highest costs in both a throwaway economy and a circular one are operational. Once regulation ensures plastics are designed to be circular, well-designed Extended Producer Responsibility (EPR) schemes can cover the full costs of ensuring the system's circularity. In the European Union (EU), the financing of collection, recycling and responsible end-of-life disposal of packaging, waste from electrical and electronic equipment, batteries, is placed on producers, reducing waste management costs by over 50 per cent (in France) and resulting in rates of over 80 per cent recycling for packaging (in Belgium).
- Policies such as a levy on virgin plastic production could drive market transformation and support the success of all necessary three shifts.
- The use of plastic credits is a system market-based solution, modelled after carbon credits. However, the system lacks globally agreed definitions and measures to safeguard the environmental and social rights, especially of the informal waste collection sector.
- At the [First session of the Intergovernmental Negotiating Committee](#), Ghana brought up the need to establish a legacy fund to which industrial leaders in the plastics sector could contribute to allocate resources to remove plastics that have already entered the environment, especially in middle- and low-income countries.

Recommendations for international action to end plastic pollution

The following elements, policies could be considered by governments when developing regulatory instruments to tackle plastic pollution and shape the ensuing action agenda:

- Reduce the size of the problem by agreeing on criteria for plastic products and related chemicals that could be banned.
- Establish a cross-border knowledge baseline.
- Accelerate reuse by considering objectives and principles for market transformation and international obligations, including rules on necessary minimum operating standards of EPR schemes and standards for reusable design.

- Accelerate recycling through design and safety standards requiring all plastic products to be reusable and recyclable, labelling, targets for minimum recycling, rules on the alignment of the informal waste sector, and minimum standards for chemicals used and for deposit return schemes.
- Reorient and diversify by identifying plastics to substitute and acceptable alternatives, as well as setting standards for compostable/biodegradable plastics.
- Deal with the legacy of plastic, using common standards for safe disposal.
- Ensure the participation, information, and access to justice for civil society, academia, consumer organizations, industry, the private sector, and individuals.
- Consider behavioural change and personal choice decisions, including gender and generational considerations, as [promoted](#) by the Government of India.