




TOMRA



Ten recommendations
for the UN's International
Legally Binding
Instrument (ILBI) on
Plastic Pollution

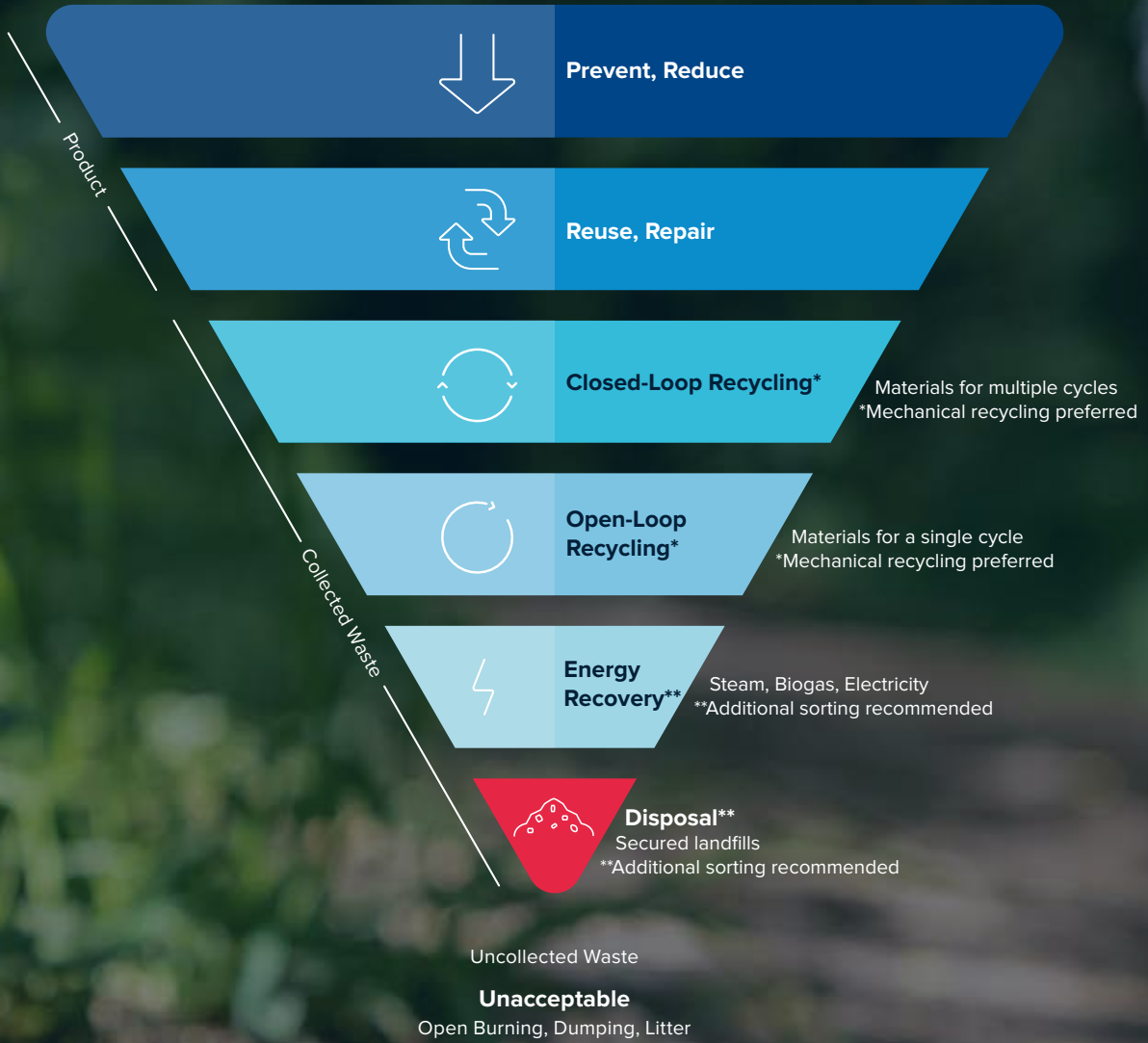
Over the past two decades, global plastic waste production has more than doubled, and is projected to nearly triple by 2060. Currently, 22 million tonnes of plastic waste is mismanaged and is either buried in landfills, burned in incinerators, or left to pollute the environment as litter - another figure expected to rise substantially by 2060. We cannot afford to ignore this crisis any longer, nor can we continue with the status quo. Fortunately, there are proven solutions to address this crisis. The challenge and global opportunity for stakeholders of the UN's International Legally Binding Instrument (ILBI) is to come to an agreement and enable them.

TOMRA is committed to contribute to ending plastic pollution and joins many other organizations in advocating for the waste hierarchy prioritizations of prevention, reduction, reuse, repair, recycling, energy recovery, and disposal of plastic. Despite extensive efforts to create a circular economy for plastics, global performance remains poor and stakeholders are slow to align. It is clear that voluntary initiatives alone are not enough to solve this problem. A better-coordinated, incentivized, regulated, and target-driven approach is needed. This is evident in regions with relatively high circular performance, which all operate under an enabling legal and policy framework. Legislation and regulations that set ambitious performance targets and deadlines have been shown to encourage early adopters to take a holistic approach to ending material waste. These communities have been able to successfully reduce littering and close the 'quality and quantity gaps' that have hindered the circular plastics value chain from functioning at its optimal level.

This document summarizes the key legal and policy drivers that have motivated the implementation of the sustainable, high-performance circular systems that exists today.

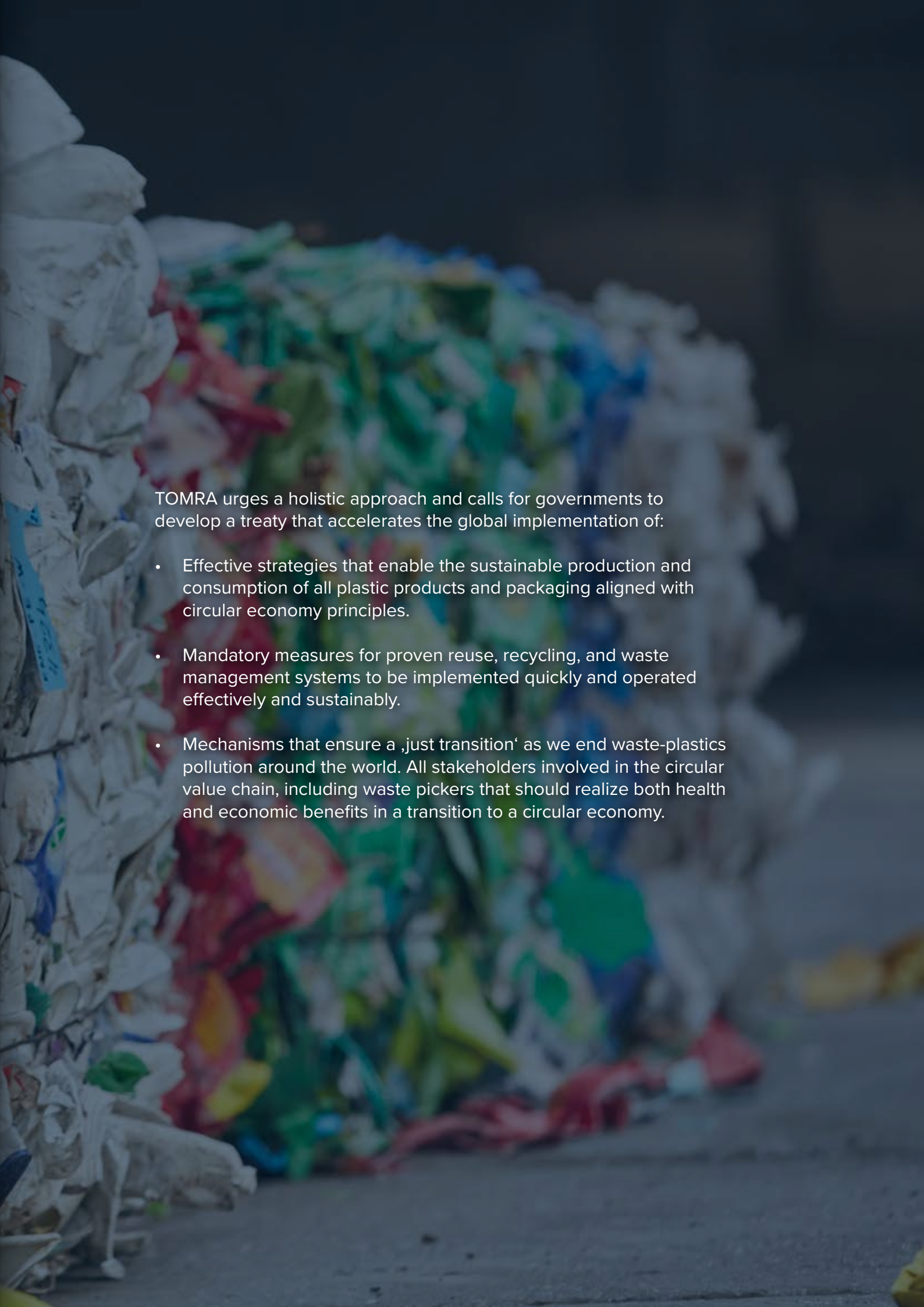
As long as plastic exists, we need to keep it out of the environment. To do this, systems must be in place to ensure that it is kept in circulation at its highest value and best use for as long as possible. The UN's International Legally Binding Instrument (ILBI) presents a unique opportunity to effectively address plastic pollution through the implementation of the waste hierarchy principles and robust policy frameworks. Such measures will incentivize and align stakeholders to establish recovery and recycling systems quickly and achieve plastic circularity in both developed and developing countries.

TOMRA's Resource Hierarchy





TOMRA's vision
for the UN's
International Legally
Binding Instrument (ILBI)



TOMRA urges a holistic approach and calls for governments to develop a treaty that accelerates the global implementation of:

- Effective strategies that enable the sustainable production and consumption of all plastic products and packaging aligned with circular economy principles.
- Mandatory measures for proven reuse, recycling, and waste management systems to be implemented quickly and operated effectively and sustainably.
- Mechanisms that ensure a 'just transition' as we end waste-plastics pollution around the world. All stakeholders involved in the circular value chain, including waste pickers that should realize both health and economic benefits in a transition to a circular economy.



Holistic
municipal solid
waste management
to drive plastics
circularity

TOMRA, in partnership with waste management consultancy Eunomia, has found that the systems that deliver maximum recycling rates and the most significant reduction in CO2 emissions, and cost efficiency are built on a holistic approach to formal waste management. This holistic approach, with the integration of **legislated Extended Producer Responsibility (EPR)** principles, combines the following elements:

1. Deposit Return Systems (DRS) for single-use and refillable beverage containers

Legislation designed to encourage the development of high-performing programs can help to create a circular system for one of the most commonly littered packages - beverage containers. A DRS with a meaningful deposit value and a convenient return model can close the tap on litter by giving beverage containers a value, incentivizing consumers to return them. Implemented as a full-cost EPR scheme, DRS will not require government funding, and with great opportunities for adaptation to different local situations, including the engagement, integration, and economic growth of waste pickers, this system is feasible for all countries. Today, almost 50 states worldwide operate DRS, with more governments making the political decision to implement new laws and update regulations to enable such systems.

2. Separate Collections for certain waste fractions

The separate collection of specific material streams, such as organic waste, paper, glass packaging, textiles, and e-waste is a key element of the circular economy. However, due to the system's reliance on consumers to practice good recycling habits, the materials captured through Separate Collections alone will not be enough to reach sufficiently high recycling rates, such as those set in EU directives.

3. Mixed Waste Sorting (MWS) prior to landfill and incineration

MWS has proven instrumental in achieving high recycling rates, particularly for plastic. In fact, countries that utilize MWS typically increase their recycling rates by 2 – 5 times.² In Europe, this will enable those countries to meet the EU's targets for 2030. When combined with advanced mechanical recycling, plastics extracted from mixed waste can be transformed into recyclates with properties similar to virgin materials. MWS should be seen as complementary to Separate Collections. At their core, MWS plants sort mixed plastic for further sorting at centralized grading (sorting) plants, thus creating a high volume of stable quality feedstock for recycling plants. However, when it comes to plastic, this process has the potential to significantly increase recycling rates even for waste streams that are highly mixed and contaminated. Adaptable to local conditions, MWS can be a key driver in increasing recycling in the global south while engaging and uplifting waste pickers – and break through low recovery rates in the global north.

4. Advanced Mechanical Recycling (AMR)

AMR has been successfully used to achieve closed-loop (bottle-to-bottle) recycling for PET beverage containers. Today, the AMR process can help to achieve circularity for plastic beyond PET beverage containers. It is now possible to create virgin-like recycled plastic pellets from both source-separated- and mixed waste streams – ensuring that the highest quality recyclate is available to those industries that depend on superior feedstock quality to reach recycling and recycled content targets and reduce their CO₂ emissions. Emerging chemical recycling techniques have the potential to complement mechanical recycling, when proven environmentally beneficial.

The combination of these elements, known as **Holistic Resource System (HRS)**³, provides field-proven results with global potential. In a 2030 scenario vs. current waste management practice, HRS has the potential to **save 2.76 billion tonnes CO₂e globally** each year – the equivalent of removing more than 600 million passenger vehicles from the road annually.

The positive impact that HRS has on plastic pollution is evident and the possibilities for these systems to expand circularity even further when nations commit to work together across value chains, are endless.

1 PETCore Europe, "The Road to 90%. How to Achieve the EU's PET Bottle Collection Targets by 2029", <https://www.petcore-europe.org/legislation/334-how-achieve-eu-pet-bottle-collection-bottle-collection-targets-2029.html>

2 Deloitte AS, "Sirkulaer plastemballasje i Norge – kartlegging av verdikjeden for plastemballasje" ("Circular plastic packaging in Norway – mapping of the value chain for plastic packaging"), Forum for Circular Plastic Packaging, April 2019

3 Dr. Debbie Fletcher, Ann Ballinger, Lily Chapman - EUNOMIA, "Waste in the Net-Zero Century: How Better Waste Management Practices Can Contribute to Reducing Global Carbon Emissions", July 2021





Recommendations
to improve plastic
circularity

Overarching objective for the UN's International Legally Binding Instrument (ILBI):

Mandatory policies to create fair **economic incentives** to **promote sustainability** and the effective management of plastic pollution, while encouraging cooperation and collaboration between the **public and private sectors**.

Core obligations and control measures should:

Provide efficient and convenient access to general waste collection for all citizens in all regions

Reduce littering, the use of open dumpsites, and open burning through investments in municipal waste management.

Set specific and ambitious recycling targets

Accelerate the implementation of established, high-performance systems that maximize recycling rates and closed-loop recycling. Obtain long-term visibility to encourage investments and creativity, thus enabling simultaneous efforts from all members of the circular value chain towards a shared target.

Establish legislated well-designed EPR

Extended producer responsibility (EPR) that motivates reduced use, increased reuse, and eco-design, including the use of recycled content or renewable feedstock. Further, that provides funding for recycling and recovery of plastic through source separation (e.g., waste electrical and electronic equipment (WEEE), textiles, and deposit return systems (DRS) for beverage containers) and residual waste sorting (e.g., general plastic packaging).

10 recommendations to improve plastic circularity

- #1** Ensure access to efficient and convenient general **waste collection for all citizens in all regions** as a universal human right. Global access to waste collection is imperative to prevent litter and end illegal dumpsites and open burning.
- #2** **Promote reuse models** by setting targets for specific categories, such as takeaway food and beverage packaging, and creating financial incentives that initiate a shift from single-use to reusable packaging wherever this is environmentally beneficial. This will work towards making plastic consumption more resource efficient.
- #3** Ensure **specific ambitious mandatory recycling targets** for high performance systems, providing realistic, strict timelines for all countries at their individual development stage. Set a minimum 55% recycling rate target for plastic packaging. This will ensure that resources are spent on efficient initiatives towards a sustainable circular economy for plastic.
- #4** Adopt **well-designed Extended Producer Responsibility (EPR) legislation** for plastic packaging. Mandatory EPR will provide a long term and sustainable financing mechanism for infrastructure investments to collect, sort, and recycle plastic waste, as well as incentivize producers to choose and manage their packaging more sustainably.
- #5** Adopt **well-designed Deposit Return Systems (DRS) legislation** for beverage containers combined with a 90% separate collection target. As a well-mandated, full-cost EPR scheme, DRS will decrease the amount of plastic that lands in nature (approximately 20%-25% of all marine litter is beverage container related) and drive circularity with a proven potential of 80% bottle-to-bottle recycling.

#6

Adopt **well-designed EPR legislation for textiles** to enable the scaling up of textile collection, sorting, reuse, and recycling infrastructure, and accelerate the transition towards a circular economy for textiles. Today, polyester represents >50% of the global fiber market with <1% of clothing being recycled into new clothing.

#7

Introduce legal measures ensuring **effective Mixed Waste Sorting (MWS) prior to incineration**, including a meaningful CO₂ tax on plastic incineration. Furthermore, energy recovery from plastic should not contribute to the achievement of recycling targets, nor be defined as renewable energy. MWS is essential for the high recovery of plastic for recycling and typically increases recycling rates by 2-5 times. Additionally, by diverting plastics from burning, this solution contributes to a reduction in CO₂ emissions. As each ton of plastic incinerated generates ~2,5 tonnes CO₂ emissions.

#8

Introduce legal measures ensuring **effective MWS prior to landfill**, including landfill plastic taxes or bans where alternative waste treatment is available. MWS will enable the recovery of plastic before it is lost to landfill, keeping these resources in circulation for as long as possible.

#9

Introduce legal measures ensuring **closed-loop – or high-quality - recycling, including recycled content targets**, financial incentives for use of recycled plastic and strict export/import control for waste and recycled plastic. This will motivate eco-design, as well as optimization throughout a circular value chain.

#10

Ensure independent institutions **control the transparent reporting and measurement of achievements** based on well-defined global industry standards. Worldwide alignment and efficient systems will create a level playing ground and stimulate real progress.



Partnerships, collaborations, and endorsements

TOMRA invites collaboration with all industry players, experts, NGOs, and governmental organizations with high ambitions for UN Treaty for Plastic Pollution.

TOMRA is an active member of the **Business Coalition for a Global Plastic Treaty facilitated by the Ellen MacArthur Foundation (EMF) and World Wildlife Fund (WWF)**

About TOMRA

Founded in Norway in 1972, TOMRA is the largest global provider of reverse vending machines (RVMs) for the automated collection of used beverage containers. Our RVMs collect over 40 billion used beverage containers every year.

TOMRA is also the leading provider of smart sensor-based sorting machines for the recycling, food, and mining industries. We are involved in many curbside collection systems for household packaging and municipal solid waste worldwide, as well as the downstream plastic recycling process with more than 8000 sensor-based sorting units installed in more than 100 countries.

With more than 50 years' experience in the circular value chain for packaging waste, we are committed to sharing our knowledge about the systems and policies that accelerate the transition towards a circular economy.

TOMRA strives for a world where, by 2030, 40% of post-consumer plastic packaging will be collected for recycling, and 30% will be recycled in a closed loop. As it stands, only ~14% of plastic packaging is captured for recycling, and only ~2% of this is recycled in a closed loop.



For additional information, please refer to TOMRA's white papers:

EPR Unpacked –
A Policy Framework for a Circular Economy

Holistic Resource Systems –
A framework approach for improving the management of waste and taking action against climate change

Rewarding Recycling –
Learnings from the World's Highest Performing Deposit Return Systems

The Ultimate Guide to Mixed Waste Sorting

Advanced Mechanical Recycling –
Enabling true circularity for plastics, now

www.tomra.com