

Creating a Circular Economy for Plastics Using a New Global Agreement on Plastic Pollution



Creating a circular economy for plastics – in which plastic products are reused and recycled instead of discarded – will help achieve the UN Sustainable Development Goals (SDGs), including goals on climate action and life below water. Plastics (and other materials) should be used for as long as feasible and then repurposed to prevent them from becoming waste. A global agreement can help develop supply chains as well as robust waste collection and recycling infrastructure that supports local/regional solutions to creating a circular economy and ending plastic waste.

Closing the Loop

By applying circular economy principles, in which plastic products are reused, repurposed and recycled instead of discarded, we can return plastics back into the manufacturing stream and make new products, building value from plastic waste as a feedstock and opportunities for additional growth. The circular economy expands the potential of materials beyond “make-use-dispose” by viewing and treating them as a feedstock for multiple new products.

A Circular Economy Helps Achieve SDGs

Keeping plastics in use for as long as feasible (re-use) and recycling plastic waste will help achieve multiple SDGs, including goals on climate change and life below water.

While plastics are exceedingly efficient materials and help reduce greenhouse gas emissions compared to alternatives, reusing/recycling plastics further drives down greenhouse gas emissions. Studies show that both mechanical and advanced (chemical) recycling technologies reduce greenhouse gas emissions associated with the production of plastics. Recycling eliminates the extraction, transport, and production of the raw materials needed to make plastics, as well as the associated emissions. These reductions in emissions contribute to climate change SDGs.

In addition, when used plastics are perceived as a valuable feedstock for new plastics and other products, these used plastics should be collected and kept out of the waste stream. Achieving a circular economy for plastics will dramatically reduce the leakage of plastics into our environment and ocean.

Create Waste Infrastructure: First Step for Circularity

Many communities throughout the world lack even basic systems to collect waste. Used materials often are discarded onto land and into waterways to our ocean. This unmanaged waste causes serious environmental and economic damage.

A global agreement should focus on supporting the creation of local and regional systems to collect plastic (and other) waste and utilize its inherent value through recycling, reuse, or repurposing. Communities will need political support, technical expertise, and funding to develop the most appropriate solutions tailored to the local/regional situation, in particular the role of the informal sector.

Develop Local/Regional Supply Chains and Markets

A global agreement can enable communities to develop new enterprises utilizing materials that today are viewed as waste. Given the appropriate expertise and resources, communities can develop solutions to plastic waste that create new products, markets, and jobs, leading to local/regional supply chains that consume used plastics. Communities should have the flexibility to create their own solutions that fit the needs and economies of their area.

Partnering with the private sector will be key to successfully creating these supply chains. Chemical and plastic makers stand ready to work with governments to facilitate cross-value chain collaborations, elevating the priority of waste management, minimizing inadequate disposal, enhancing solid waste infrastructure, improving livelihoods of waste collectors, and enabling sustainable growth in markets for recycled materials.

Utilize New Recycling Technologies

Enhancing the deployment of new recycling technologies will increase the value of recycled materials, encouraging sustainable supply chain growth.

For example, advanced (chemical) recycling technologies can significantly expand the amounts and types of plastics that can be recycled, converting non-recycled plastics into feedstocks and new products. Advanced (chemical) recycling technologies are complementary to traditional mechanical recycling and can be an important part of communities' integrated solid waste management. These technologies can be tailored to specific local/regional/national needs, such as incorporating the informal recycling sector.

Countries should ensure permitting frameworks and regulations for recycling technologies enable deployment of these advanced 21st century innovations.

Advance Design for Circularity

A global agreement can help facilitate collaboration between government and the private sector by developing guidance on sustainability by design approaches. The plastics value chain can contribute in this respect as it is already applying “Sustainability by Design” approaches for developing innovations in product delivery and packaging formats to reduce waste and increase recyclability and recoverability.