



보도자료



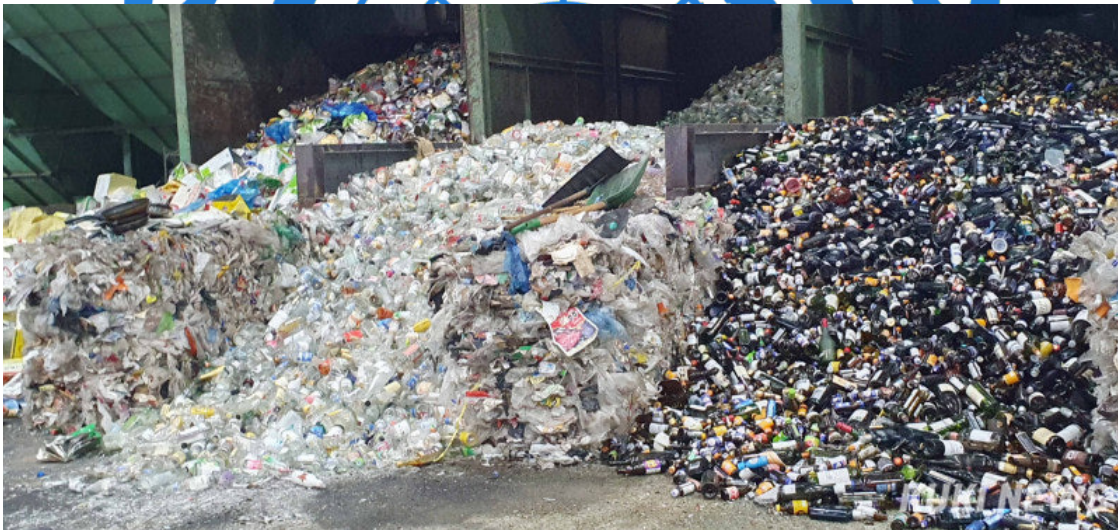
보도시점

배포 즉시

배포 2025. 09. 09. (수요일)

“Does Sorting Waste Guarantee Full Recycling?” The Inconvenient Truth Behind Plastic Recycling

- The Reality Hidden Behind High Recycling Rates: “Recycling Alone Cannot Solve the Plastic Crisis” -



이미지 출처: 쿠키 뉴스

Do PET bottles and plastic containers separate-collected by consumers all transform into new products? The reality suggests otherwise. A significant portion of the plastic submitted for recycling fails to be processed through the various stages of waste management. In particular, a clear discrepancy exists between the statistically reported recycling rate and the actual proportion of material reused as raw feedstock for new products, prompting ongoing skepticism regarding the true efficacy of plastic recycling. According to a Greenpeace report analyzing domestic plastic

recycling, the statistically recorded recycling rate for plastic waste reaches approximately 64%. However, the actual rate of material recycling, where waste is processed into raw materials for new products, remains at roughly 26%. This statistical divergence occurs primarily because thermal recovery, which involves incinerating waste plastics to capture energy, is formally included under overall recycling statistics, creating a gap between public perception and official metrics.

Operational challenges further complicate the recycling process. Plastics comprise diverse polymers, including PET, PP, PE, and PVC, so mixing these distinct resin types significantly hinders recycling. Furthermore, plastic items contaminated with food residue or foreign substances, as well as multi-layer composite packaging materials, present severe limitations during processing. Consequently, not all plastics separated and disposed of by consumers successfully re-enter the production cycle as new goods.

The continuous escalation in overall plastic consumption poses a structural threat. Research from the Korean Society of Environmental Engineers reveals that South Korea's per capita plastic consumption expanded tenfold, rising from 15 kg in 1982 to 150 kg in 2020. Correspondingly, per capita plastic waste generation rose sharply from 2 kg to 139 kg over the same period. These metrics demonstrate that regardless of advancements in recycling technology, resolving the waste crisis remains unattainable if the baseline volume of plastic production and consumption continues to climb.

In response, the government is moving beyond passive waste treatment to establish a circular economy that converts post-consumer plastics into recycled raw materials for manufacturing. The policy framework aims to reduce the use of virgin plastic feedstock by over 30% by 2030, while

simultaneously expanding the adoption of recycled content and reusable containers. Additionally, authorities plan to bolster recovery and recycling operations through AI-powered sorting systems and pyrolysis technologies, alongside a phased reduction in single-use plastics. Supported by expanding repair infrastructure and public plastic-reduction campaigns, the scope of these resource-circulating policies is projected to encompass emerging waste streams, such as end-of-life batteries and discarded solar panels.

The department in charge The 3rd HLMUN PRESS team	Team leader	Total management	CHOI DAIN
	Team member	Writer&Article translator	SONG YOONJIN, JANG SEOEON
Hallym University Student Council hallym40th_chanlan@naver.com			
Hallym University 4rd HLMUN hallymmun@gmail.com			