

Streams of Plastic Waste and Materials from The Perspective of the European Union

Magdalena Panasiuk-Kwiatek

Maria Curie-Sklodowska University, Poland

m.panasiuk@umcs.pl

Abstract

This study offers an examination of waste and plastic material streams within the framework of European Union policy initiatives. Through a comprehensive examination of statistical data regarding the manufacture, consumption, and recycling of plastics at both regional (EU) and national (Poland) levels, the article elucidates significant trends and interconnections. Presently, there exists an escalating interest in recycling and sustainable waste management, precipitating increasingly stringent regulations and investments in novel technologies. Particular emphasis is placed on scrutinizing the flow of repeat (granulate), encompassing both domestic production methodologies and imports from regions beyond the European Union. Furthermore, the article deliberates on alternative modalities for plastic utilization and pioneering strategies concerning production, recycling, and waste management, all geared towards mitigating adverse environmental impacts and fostering sustainable progress. Within the EU ambit, alternative applications of plastic materials encompass textile fabrication, construction materials, furniture, household commodities, and athletic paraphernalia, thereby contributing to waste reduction, diminished utilization of natural resources, and advancement of sustainable development. Projections indicate a sustained proliferation in global plastic production, engendering challenges in effectively managing the life cycle of such materials. The analyses presented hold significant implications for policymakers and corporate stakeholders, offering insights into efficacious environmental preservation and resource administration amidst impending challenges.

Keywords: plastics, material flow, European Union, recycling, innovation, waste management