

PLASTIC POLLUTION: A GLOBAL PROBLEM AND SOLUTIONS

Vinnytsia National Technical University

Abstract

Scientists have examined the impact of plastic waste on ecosystems and proposed ways to reduce it, including improved waste management, recycling technologies, and international cooperation.

Keywords: plastic pollution, global crisis, marine ecosystems, waste management, recycling technologies, international cooperation, environmental impact.

Анотація

Вченим вдалося розглянути вплив пластикових відходів на екосистеми та запропоновано шляхи їх зменшення, включаючи покращення управління відходами, технології переробки та міжнародну співпрацю.

Ключові слова: пластикове забруднення, глобальна криза, морські екосистеми, управління відходами, технології переробки, міжнародна співпраця, вплив на довкілля.

At the moment, plastic is a material that we use daily, without thinking about its impact on the environment. The convenience of using plastic often outweighs our concerns about what happens to it after we discard it. Plastic takes hundreds of years to decompose, releasing toxic chemicals that contaminate the environment, polluting soils and waters. About 80% of marine plastic comes from land, washed by rain into rivers and seas, causing irreversible damage to marine ecosystems and human health. Oceans contain millions of tons of plastic waste, which threatens marine animals that may get tangled in it or ingest it. Plastic pollution harms not only ecosystems but also climate and human health. [1]

Avoiding single-use plastics is one of the first and most important steps in combating plastic pollution. Using reusable bags, bottles, utensils, and containers significantly reduces the amount of waste we generate. Every year, 20 billion plastic bottles are discarded, and switching to a reusable bottle can save resources and money. [3]

The problem of plastic pollution is global, with around 400 billion kilograms of plastic waste produced worldwide every year, and only a small portion of it is recycled. Single-use plastics, such as bags, bottles, and straws, pose the main threat because they are often improperly disposed of and end up in oceans, worsening the state of ecosystems. Plastic decomposes over hundreds of years, turning into microplastics that pollute the environment and can enter the food chain. [2]

Various international initiatives are also underway to combat plastic pollution. Some countries have introduced bans on single-use plastics, helping to reduce plastic footprints. The UN Environment Assembly (UNEA) 2021 resolution promotes improving plastic collection, developing a circular economy, and increasing awareness. The EU Directive 2019 banned plastic straws, utensils, and plates, requiring manufacturers to fund the disposal of plastic waste. The ASEAN Framework Program 2019 covers policy, research, education, and business participation in the fight against marine litter. [1]

Many companies are also implementing solutions to reduce plastic pollution. For example, Mohawk produces carpets made from recycled plastic bottles, Ikea stopped using plastic bags back in 2008, and LOS Market in Denmark became the first store without packaging. [2]

Conscious consumption also plays an important role. The “Plastic-Free July” movement encourages people to reduce plastic usage, raising consumer environmental responsibility. The younger generation actively supports eco-conscious brands, encouraging businesses to switch to sustainable alternatives. [3]

To effectively combat plastic pollution, comprehensive measures are needed, including government initiatives, business responsibility, and conscious consumer choices. UNEP helps countries develop laws to reduce pollution, improve product design, and develop recycling systems. Currently, 40 countries have implemented Extended Producer Responsibility (EPR) policies, which increase plastic recycling rates. [1]

The financial sector is also joining the fight against plastic pollution. 180 investors, banks, and insurance companies (with a total of \$17 trillion in assets) have signed a statement supporting the agreement to combat plastic pollution. [1]

Conclusion

Plastic pollution is a global problem requiring immediate action. Individuals can reduce their plastic footprint by avoiding single-use plastics, using reusable items, and supporting eco-friendly brands. Governments and businesses must implement policies to curb plastic pollution. Together, we can mitigate the effects of plastic pollution and ensure a sustainable future for the planet.

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Yaremchuk Anna V. – student, Department of Management and Information Security, Vinnytsia National Technical University, Vinnytsia, e-mail: aaremcuk08@gmail.com

Scientific Supervisor: **Slobodianiuk Alla A.** – Senior Lecturer of the Foreign Languages Department, Vinnytsia National Technical University, Vinnytsia, e-mail: a.allavin@gmail.com

Яремчук Анна Вячеславівна – студентка групи МВКД-236, факультет менеджменту та інформаційної безпеки, Вінницький національний технічний університет, м. Вінниця; e-mail: aaremcuk08@gmail.com

Науковий керівник: **Слободянюк Алла Анатоліївна** – старший викладач кафедри іноземних мов, Вінницький національний технічний університет, м. Вінниця, e-mail: a.allavin@gmail.com