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ZERO WASTE PROGRAMME – KEY PRINCIPLES AND IMPLEMENTATION PROSPECTS

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Annotation. *The work examines the principles of the Zero Waste programme and the specifics of its implementation in Europe and Ukraine. The programme can be implemented at the level of cities, business structures, as well as in personal life. The work also proves the relevance of using eco-friendly packaging.*

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The problem of recycling packaging products and the absence of such habits as "eco-friendly consumption behavior", i.e. neglecting the concept of reuse, leads to an increase in the number of landfills. More than 2 billion tonnes of waste are generated globally every year, and 40% of it is disposable packaging [1].

The purpose of this paper is to study the principles and peculiarities of implementing the «Zero Waste» programme, the specifics of using eco-friendly materials and eco-friendly packaging for printed products.

The Zero Waste programme is about conserving all resources by responsibly producing, consuming, reusing and recycling goods, packaging and materials, without burning them and without polluting land, water or air that threatens the environment or human health. Zero Waste is a movement that brings together municipalities, international organisations, local initiatives and individual activists to gradually reduce waste.

The «Zero Waste Alliance Ukraine» public union was formed in early 2019 by three organisations: «Zero Waste Lviv», «Zero Waste Society», and «Centre for Media and Public Initiatives» (also known as «Kharkiv Zero Waste»). In February 2022, three NGOs joined the Alliance: «Zero Waste Lutsk», «Mariupol Sorts», and «Ecological News» (Kherson).

The main goal of «Zero Waste» is to move towards a circular economy, where what is commonly referred to as waste becomes a valuable resource for further reuse, recycling and the production of new goods. In order to achieve this goal, «Zero Waste Europe» has established a waste and resource management mechanism.

The hierarchy of «Zero Waste» principles is as follows: reduce - reuse - recycle. That is, before you buy something that you will need to throw away or sort and recycle, think about what you can reuse. Implementing Zero Waste principles is an important part of efforts to achieve global change. This includes promoting the use of reusable tableware and packaging instead of disposable plastic, as well as recycling.

Participants of this initiative pay much attention to auditing producers on plastic pollution, educational activities and work with local authorities.

The Break Free From Plastic (#Breakfreefromplastic) movement is a global movement that was formed and is working towards a future free of plastic pollution. Since its formation in September 2016, more than 1,900 NGOs and individuals from around the world have joined the movement demanding a significant reduction in single-use plastic and pushing for sustainable solutions to the plastic pollution crisis.

Supporters of this movement share common values of environmental protection and social justice that are central to community-based work and work to implement a holistic approach to tackling plastic pollution. This means reducing pollution at every stage: from plastic production to disposal, including measures to reduce the use of household plastic itself.

The We Choose Reuse (#WeChooseReuse) campaign is a public campaign to increase recycling, reduce waste and introduce reuse systems at all levels of the product life cycle: from production to service, household use and disposal [2, 3].

«Zero waste» principles are implemented at the level of cities and communities, at the level of companies and business structures, and in our personal lives.

The Zero Waste principles for manufacturing companies and business structures are as follows:

- use raw materials made from recycled materials. If new extraction is required, give preference to raw materials from regenerative sources. The transition of enterprises to zero waste will reduce the amount of landfills and incinerated waste by 90%;
- promote the transition from a linear to a circular production system and maximise the use of residues and recycled materials;
- avoid creating waste during and after the production process;
- take into account the energy consumption and waste management generated during the use of your product in production optimisation calculations;
- apply eco-design and reduce pollution and waste generated during the life cycle of your product;
- shift the focus from the productivity of your employees to the productivity of your production resources.

To support this programme, it is necessary to follow the principles of zero waste in your personal life. There are only five simple steps to conserve natural resources and reduce the burden on our planet's ecosystem (fig. 1).

Step one: Refuse.

Conscious consumption and refusing to make unnecessary purchases is the first step towards reducing waste. Plastic packaging is an unnecessary thing that surrounds us everywhere. Spend your money on high-quality and really necessary things that will last you a long time.



Figure 1 – Environmental behaviour according to Zero Waste rules

Simple things that will reduce the amount of rubbish on the planet:

- a shopping bag made of fabric instead of plastic bags;
- eco-bags for goods by weight instead of dozens of bags;
- convenient lunch box instead of lunch in disposable containers;
- your own water bottle instead of a lot of plastic ones from the store;
- a coffee mug instead of disposable tableware.

Step two: Reduce.

That is, less stuff means less waste. Less wasted resources means more benefits. Choose the necessary things and household items and avoid the secondary and optional ones. Some kitchen appliances can be borrowed and some unnecessary items can be donated. If you are not sure about your choice of cosmetics, use trial samples. Gradually, you will realise what is really necessary and important to you.

Step three: Reuse.

Choose quality products made from recyclable materials. You can often exchange or find the things you need for free. And this is not about poverty. It's about conscious environmental thinking and refusing to consume for the sake of consumption.

Step four: Recycle.

Recycling alone cannot solve the problem of waste, but it is an important part of caring for the environment when it comes to waste that cannot be avoided in any other way. Proper sorting is an essential step for further recycling. More and more containers for distributed collection are now available - take advantage of them.

Step five: Rot.

Organic waste and food scraps can be easily converted into fertiliser using home compost. It is easy to set up even in a city apartment and then feed the plants in the house flower garden or pots. Residents of large cities can install a dispenser under the kitchen sink to grind organic waste before it goes down the drain [2].

Due to excessive environmental pollution from plastic and other waste, the concept of "eco-friendly design" is becoming more popular, meaning that an attractive image equals environmental friendliness.

Consumers have a high demand for environmentally friendly products from their favourite brands. In a 2020 study by Trivium Packaging, 74% of consumers said they would pay more for environmentally friendly packaging [4]. By the way, Trivium Packaging is a leading global company that provides high-quality recyclable metal packaging.

Due to changes in society's attitude towards environmental protection and eco-trends, many foreign and Ukrainian brands are looking for innovative solutions in the design and production of environmentally friendly packaging. This involves the use of certain recyclable or compostable materials and special processes that cause the least possible damage to the environment.

A good idea is to find a cost-effective way to reduce the environmental impact of used packaging, namely to find more uses for it - reuse. Usually, after fulfilling its original purpose, the packaging is sent to the trash, which is not necessary, as there are certainly options for reusing the product.

The production of eco-friendly packaging is very relevant nowadays, as the emission of countless amounts of garbage is leading to an environmental catastrophe, so reducing waste, reusing and recycling it is the way to solve such a global problem as plastic pollution.

Examples of eco-packages are shown in fig. 2.

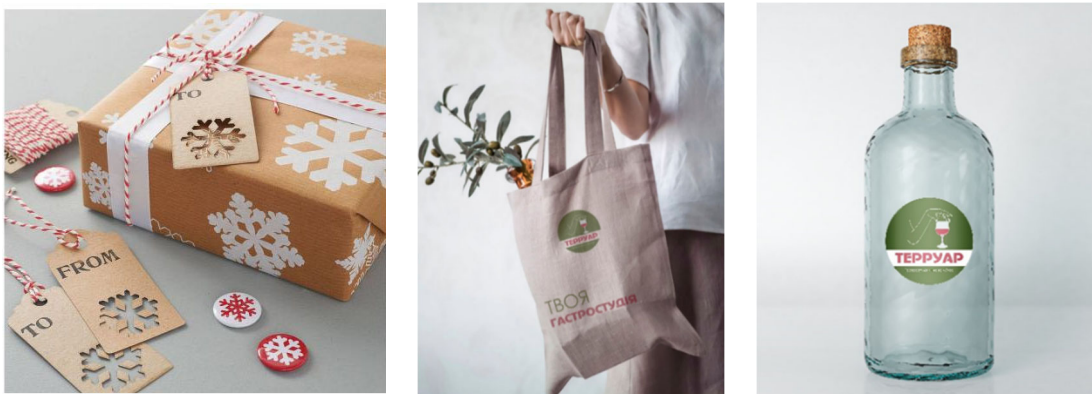


Figure 2 – Examples of eco-packages

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