

In Belarus, about 70% of all waste is not recycled and ends up in landfills. Landfilling is the most environmentally unfriendly and wasteful method of waste management. Toxic substances seep into the soil and groundwater, and during the decomposition of waste, greenhouse gases are generated. Moreover, materials that could be recycled and used in production are being sent to landfills.

- Belarus has 7 waste processing plants, 80 lines for sorting municipal solid waste, and about 2,000 enterprises that reuse waste.
- As of 2022, there are 160 municipal solid waste landfills and a network of mini-landfills in Belarus, accumulating more than 100 million tons of waste.
- 80% of Belarus' population considers waste collection and recycling a relevant issue, and half of the country's residents already engage in some form of waste sorting.

Just 30 years ago in Sweden, over 60% of waste was sent to landfills, whereas now it's only about 1%. Sweden's exemplary waste management system was established through a combination of measures:

- Gradual bans on landfilling various types of waste and fines for improper sorting and disposal.
- Source-separated waste collection by the population.
- Construction of 32 Waste-to-Energy plants for heat and electricity production from non-recyclable waste.
- Production of biogas from organic waste and wastewater.
- Creation of a network of reuse centers and second-hand shops.
- Promoting environmental awareness through informational campaigns, education of children, and their influence on older generations.

Waste management and resource conservation are the foundations of a green economy. The EU, USA, Canada regulate waste issues at the production stage: eco-design, content of recycled materials, repairability, and recyclability become mandatory for a wide range of products, including exports. Circular business models help companies save on raw materials and carbon costs while developing new industries.

The challenge remains with **non-recyclable waste**, which due to the lack of processing technologies continues to be sent to landfills. An alternative could be waste-to-energy incineration in modern Waste-to-Energy plants (WTE), where a 6-stage purification process makes it the cleanest waste incineration method, allowing them to be located within urban areas, as in Vienna or Stockholm.

*A Waste-to-Energy plant with a capacity of 200,000 tons per year can convert Minsk's non-recyclable waste into electricity and heat for 25,000 apartments, saving 55 million cubic meters of natural gas. The cost of such a plant is about 150 million euros, with a payback period of around 7 years at current energy prices.*

Incineration can help solve the pressing issue of urban landfills, but in the long term, improvement of waste reduction, recovery, and recycling technologies is necessary.

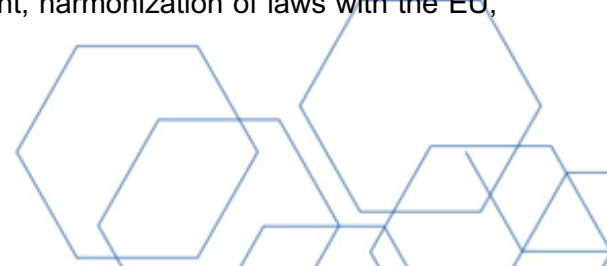
## **Benefits for Belarusians**

Waste management not only addresses landfill issues but also becomes an economic driver, saving raw materials and energy, creating new jobs and industries, returning land to agricultural use, restoring biodiversity, and improving people's quality of life.

The waste processing sector creates 25-60 jobs per 10,000 tons of waste, with 10 and 5 jobs for sorting and incineration, respectively. The development of a zero-waste economy in the EU between 2012 and 2018 created around 4 million new jobs.

## **Sources of reform financing**

Funding for Belarus can be obtained in the form of loans, grants, international material and technical assistance programs, business investments, and financial institutions such as the World Bank, EIB, EBRD. To attract investments, market mechanisms for waste management, harmonization of laws with the EU, and green financing are necessary.



## How to Improve Waste Management in Belarus?

Waste management should become an integral part of a **circular economy development strategy**, focusing on the circular use of resources and waste minimization through eco-design, involvement in the production of secondary resources and byproducts.

Legislative Norms	Practical Implementation
<b>1. Reduce Waste Generation</b>	
<ul style="list-style-type: none"> <li>- Ban on specific categories of disposable goods</li> <li>- Measures to reduce plastic and packaging volumes</li> <li>- Eco-design requirements</li> <li>- Right to repair guarantees</li> <li>- Increased tariffs for non-sorted waste</li> <li>- Gradual prohibition of various waste types landfilling</li> </ul>	<ul style="list-style-type: none"> <li>- Use reusable and biodegradable packaging</li> <li>- Implement electronic document management</li> <li>- Ensure drinking water supply for the population</li> <li>- Promote breastfeeding</li> <li>- Expand repair workshops network</li> <li>- Establish a system of sharing and goods exchange</li> <li>- Implement "Product as a Service" business model</li> <li>- Encourage long-lasting, upgradable, repairable products</li> <li>- Abandon programmed obsolescence, fast fashion</li> <li>- Promote eco-friendly fashion</li> </ul>
<b>2. Reuse</b>	
<ul style="list-style-type: none"> <li>- Hazardous waste collection system</li> <li>- Introduction of recycling centers</li> <li>- Incentivize separate collection of a wide range of waste</li> <li>- Standardize and set targets for preparation for reuse</li> </ul>	<ul style="list-style-type: none"> <li>- Establish a network of reuse centers for tools, electronics, furniture, equipment</li> <li>- Install containers for collecting clothing, footwear, textiles</li> <li>- Expand and popularize second-hand shops</li> <li>- Use second-hand goods for spare parts</li> <li>- Set targets for preparation for reuse for packaging, glass, electronics</li> </ul>
<b>3. Recycle</b>	
<ul style="list-style-type: none"> <li>- Unified system for separate waste collection</li> <li>- Ban on environmentally unfriendly technologies</li> <li>- Implementation of competitive Extended Producer Responsibility system for waste collection and recycling</li> <li>- Implementation of eco-modulation of fees ("polluter pays")</li> <li>- Deposit system for packaging circulation</li> <li>- Transition from communal services monopoly to market relationships</li> <li>- Set targets for secondary resource content</li> </ul>	<ul style="list-style-type: none"> <li>- Introduce separate collection of organic waste</li> <li>- Equip public spaces and residential yards with containers for organic, packaging, paper waste, etc.</li> <li>- Start waste sorting education from kindergarten</li> <li>- Collect hazardous waste in stores, pharmacies, schools, recycling centers</li> <li>- Utilize secondary resources in production:               <ul style="list-style-type: none"> <li>• Construction waste for building materials</li> <li>• Wood waste for fuel briquettes</li> <li>• Fats and oils for biofuel</li> <li>• Old tires for road surfaces</li> <li>• Textile recycling and recovery</li> <li>• Furniture, utensils, clothing from recycled materials</li> </ul> </li> <li>- Establish a Secondary Resource Exchange, export</li> </ul>
<b>4. Treatment of Non-Recyclable Waste</b>	
<ul style="list-style-type: none"> <li>- Separate collection of organic waste, prohibition of its burial</li> <li>- Ban on landfilling waste suitable for energy recovery</li> <li>- Elimination of mini-landfills</li> <li>- Adherence to EU technological standards</li> </ul>	<ul style="list-style-type: none"> <li>- Produce biogas from organic waste and wastewater</li> <li>- Generate heat and electricity from non-recyclable waste in WTE plants</li> <li>- Chemically recycle plastics</li> <li>- Produce energy, hydrogen, methanol through gasification</li> <li>- Equip landfills with sorting lines</li> <li>- Collect landfill gas at landfills</li> </ul>

For the reform's success, reforms in communal services are necessary, extending the authority of municipalities, introducing market regulation mechanisms, creating a favorable economic environment.

