

# Waste to Energy Market in Poland

A comprehensive overview of Poland's emerging waste management infrastructure and energy production solutions presented by Jakub Bator, Member of the Management Board, Polish Waste to Energy Association.

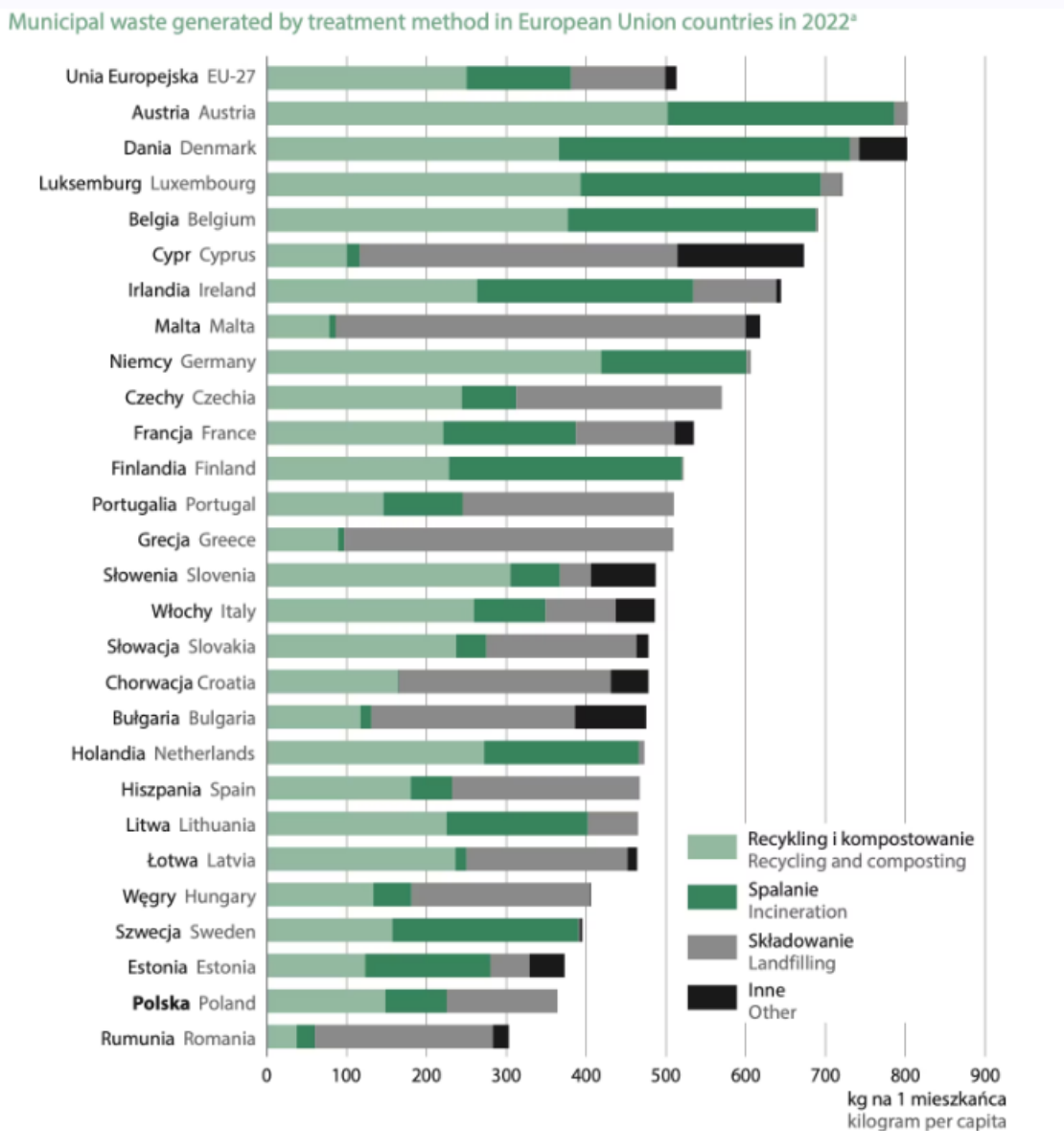
# Municipal Waste Generation Comparisons

## Poland vs. European Union

**Poland:** Only 367 kg per capita annually

**EU Average:** 511 kg per capita annually

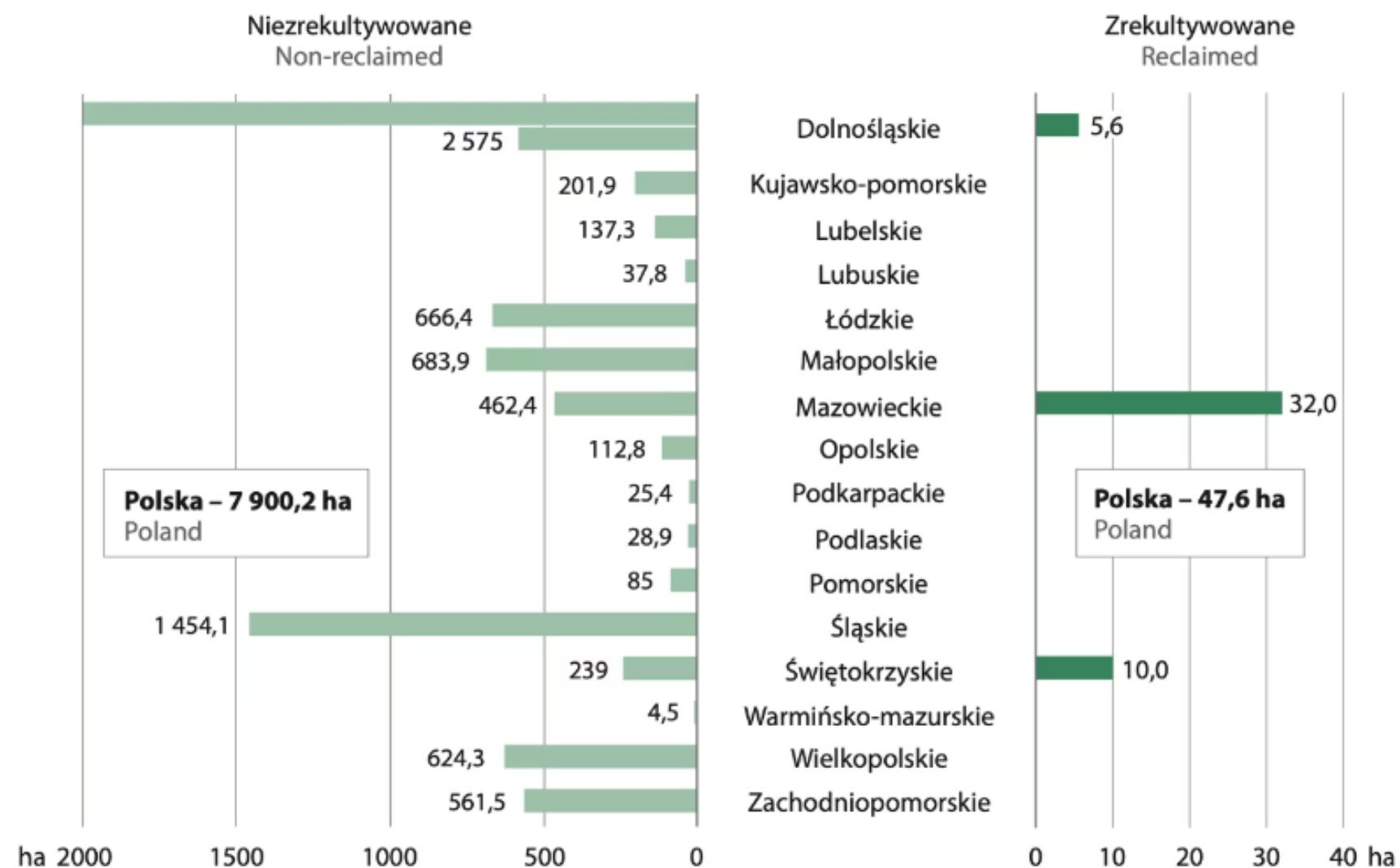
Polish citizens generate **28% less waste** than the average European, positioning Poland as one of the more sustainable waste producers in the region.



# Let's stop landfill Let's be honest

More than 30% is still being landfilled

**Tereny składowania odpadów<sup>a</sup> według województw w 2023 r.**  
Waste landfills<sup>a</sup> by voivodships in 2023





# How Much Area Do Landfills Actually Occupy in Poland?

Landfills in Poland occupy nearly as much area as the entire Białowiecki National Park



Landfill Areas in Poland

Thousands of hectares dedicated to waste storage

There is no 100% recycling level in the real world, but we can significantly reduce landfill usage




Białowiecki Park Narodowy

One of Europe's last primeval forests

# Waste to Energy in Poland

 We have:

- **1,735 Mt**
- **11 MVA**

 That is **12%** of all municipal waste

 We need: **4.2 million**



L.p.	City	Capacity (Mg/year)
1	Krakow	245 000
2	Poznan	250 000
3	Bydgoszcz	180 000
4	Szczecin	176 000
5	Bialystok	120 000
6	Rzeszów	100 000
7	Conin	94 000
8	Warsaw	50 000*/265 000
9	Gdansk	160 000**
10	Olsztyn	110 000**
11	Zabrze	250 000***
In total		1 735 000

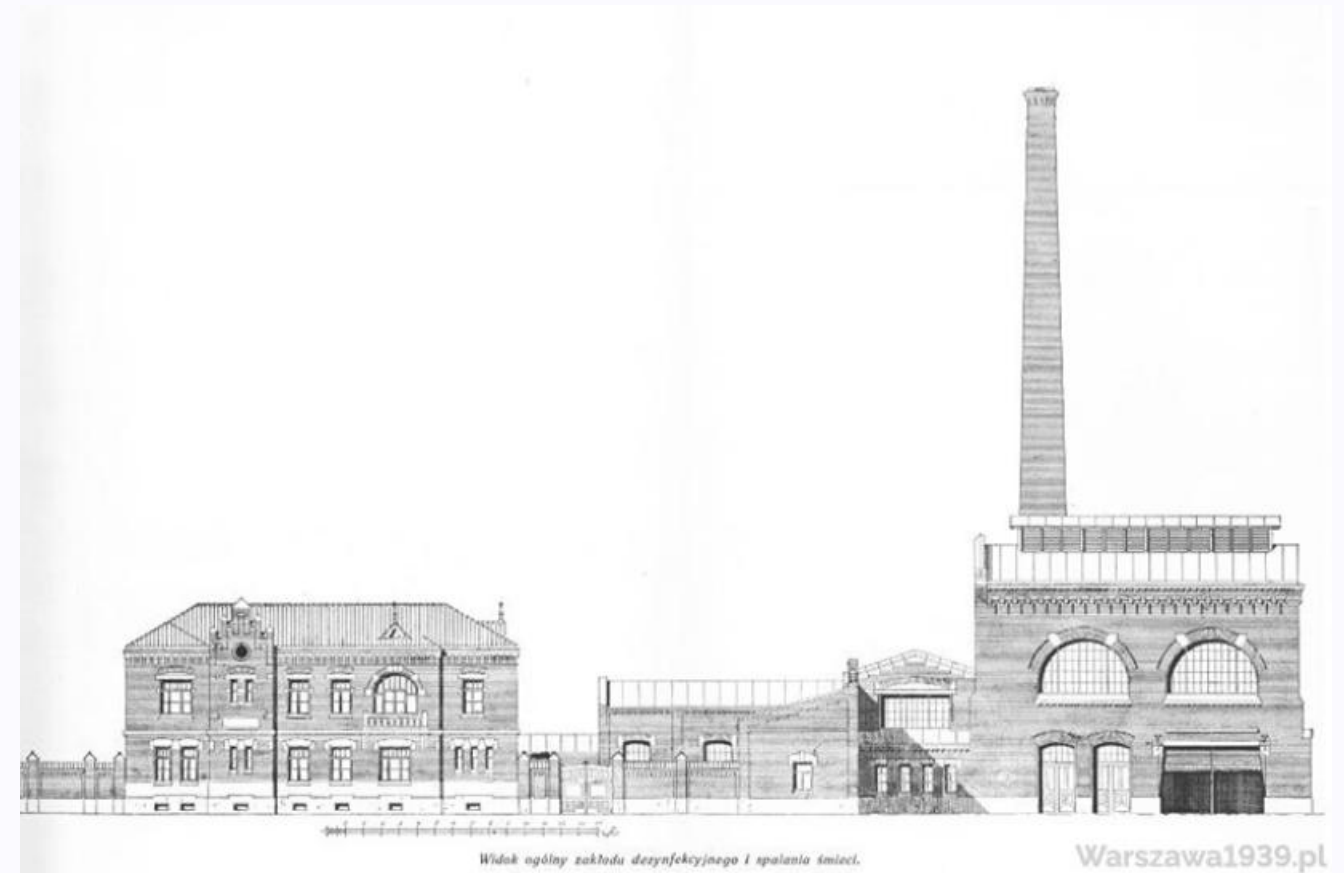
\* MVA under construction with a capacity of 265 200 Mg/year

\*\* Planned start 2025.

\*\*\* Co-incineration plant for municipal waste

# When did the waste-to-energy market take off in Poland?

The incineration plant, which was part of the Municipal Sanitation Works, was put into operation in 1912 and operated until 1944.



# Stage I: First Polish WtE Plants (2007–2013)

6 installations under Operational Programme Infrastructure and Environment 2007–2013

Total project value: PLN 3.99 billion

Co-financing

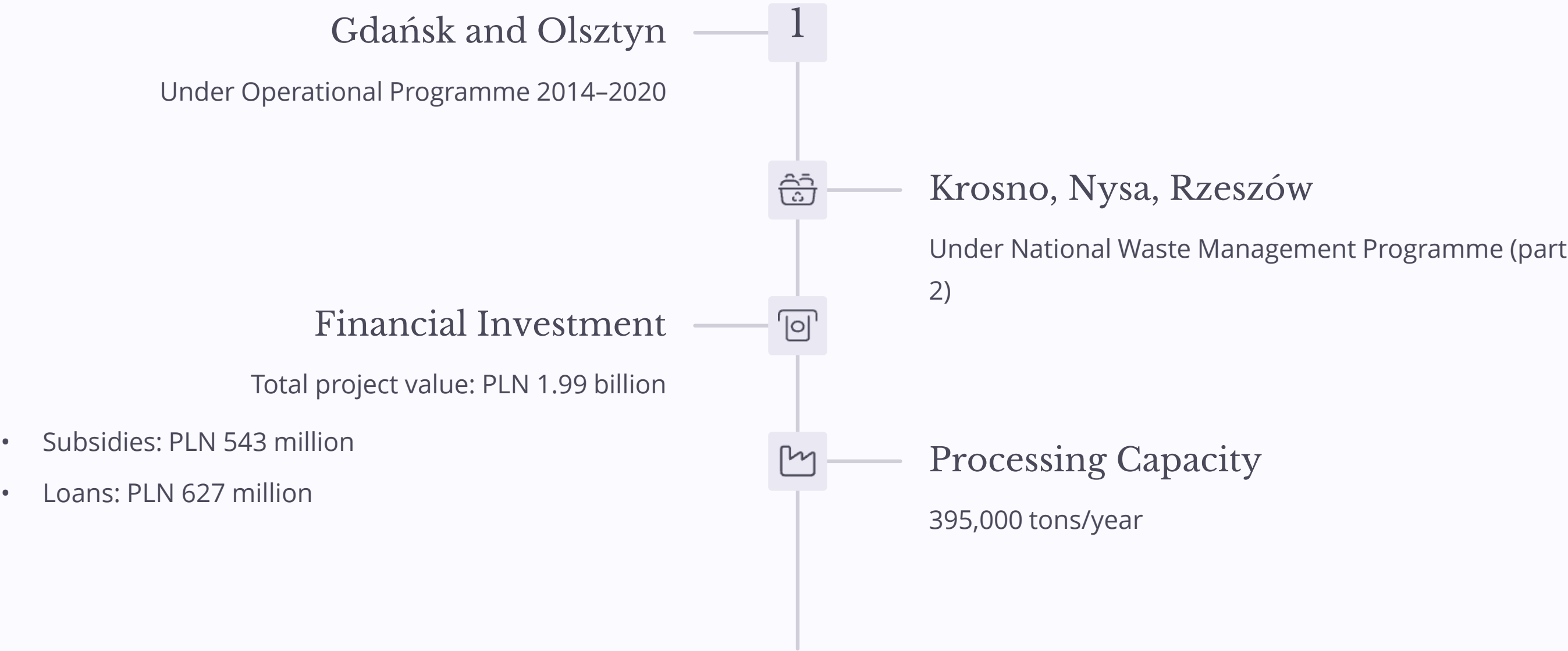
Processing capacity: 974

Subsidies: PLN 1.61 billion

Loans: PLN 1.05 billion

# Stage II: Continued Development (2014–2023)

Poland continued expanding waste-to-energy infrastructure with five key projects during this phase.





# Stage III: Regional Expansion (2023+)

18 projects under National Waste Management Programme

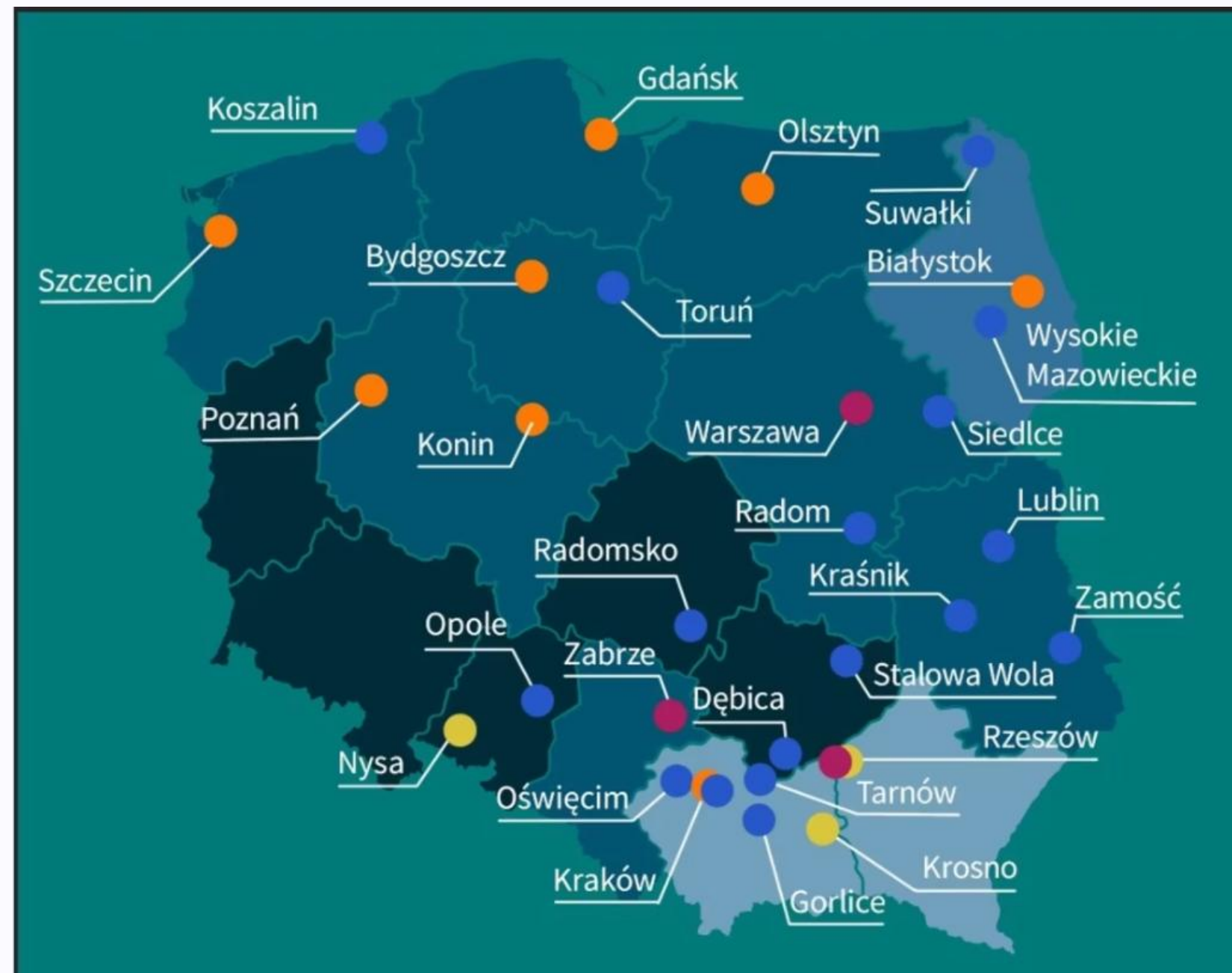
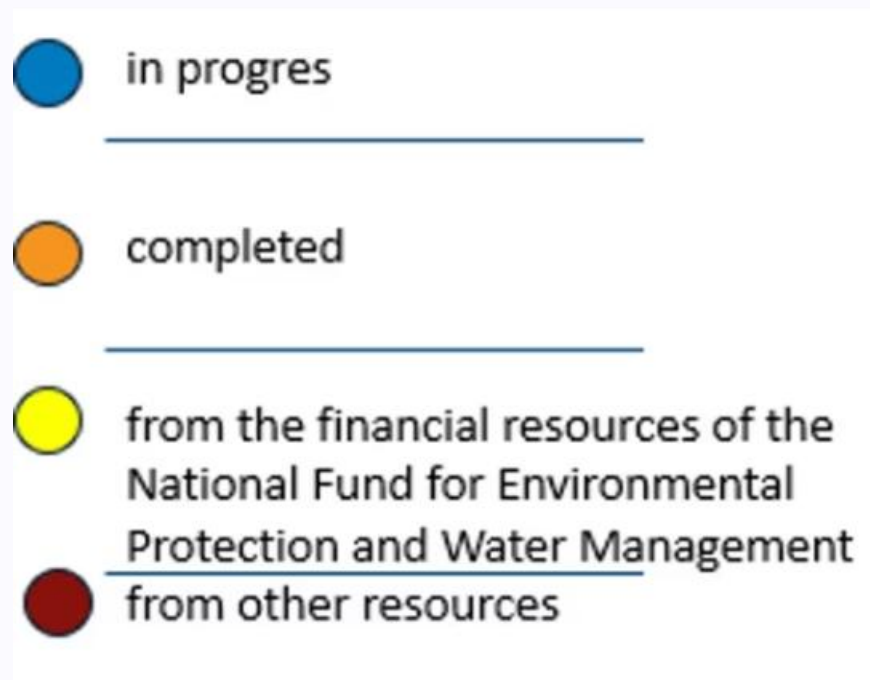
Part 3 – alternative fuels

Total project value: PLN 5.22 billion

## Co-financing

- Subsidies: PLN 1.12 billion
- Loans: PLN 2.22 billion

Processing capacity: 806,630 tons



Source: Narodowy Fundusz Ochrony Środowiska

# Polish Government WTE Capacity Goals

30%

WTE Target

Portion of municipal waste designated for thermal treatment

4.2M

Total Capacity

Tons of waste processing capacity needed annually

This strategic goal represents a significant scaling up of Poland's waste-to-energy infrastructure to address growing waste management challenges while reducing landfill dependency.

# Regulatory Framework Supporting WTE

## Landfill Tax

91 euros per ton creates strong financial incentive to find alternative waste management solutions.

## Landfill Ban

Prohibition on landfilling waste with calorific value higher than 6 MJ/kg diverts combustible materials.

## District Heating Priority

Heat generated from WTE plants receives priority access to district heating networks.

Poland's legal framework creates a favorable environment for waste-to-energy development through both restrictions and incentives.





# Emerging Risks for WtE Development

## ARE WE FRIENDS OR ENEMIES?

- Energy Efficiency Directive
- ETS
- Taxonomy
- Illegal landfill
- Not recognizing as “Waste Heat”



# ZERO LANDFILL POLICY

We should focus on implementing comprehensive zero landfill strategies rather than opposing measures that help achieve this goal.