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Promoting source separation of Biowaste for a Sustainable Circular Economy in the Baltic Region

Background

The European Union Waste Framework Directive mandates the separate collection and sustainable utilization of biowaste at the source in member states from January 1, 2024, to achieve the EU's target of recycling 65% of municipal solid waste by 2035. However, less than 50% of municipal biowaste is being collected separately in member states. This presents significant challenges for the Baltic countries, where some need to develop new collection systems and waste treatment facilities, while others must improve their existing systems. Moreover, up to 60% of biowaste still ends up in residual waste bins, which poses a concern for the solid waste management system.

Study Area

The cities examined in this study include Bornholm, Lappeenranta, Rostock, and Gdańsk distributed across different countries. The selected cities are located within the geographical vicinity of the Baltic Sea, a brackish inland sea in Northern Europe (Figure 1).

Methods

This study was a collaborative effort involving experts from Germany, Finland, Denmark, and Poland. The methodology employed in this study involved an extensive review of scientific literature and seven discussion meetings from January to March 2023 between involved experts. The research aimed to identify the challenges, gaps, and potential measures to improve the source separation of biowaste in the Baltic region.

Results

- Management of biowaste varies significantly due to consumption patterns, economic wealth, regional policies, technical infrastructure, and public awareness.
- The studied areas have national-level regulations on biowaste source separation and landfill bans. Aside from Germany, other countries have recently implemented these regulations, leading to a transitional phase in biowaste management.
- Local authorities often struggle to adapt solutions to their specific context due to limited flexibility and resources. Sharing experiences and knowledge can mitigate repeating mistakes, foster cross-border collaboration, and enhance local authorities' capacity to improve biowaste source separation.

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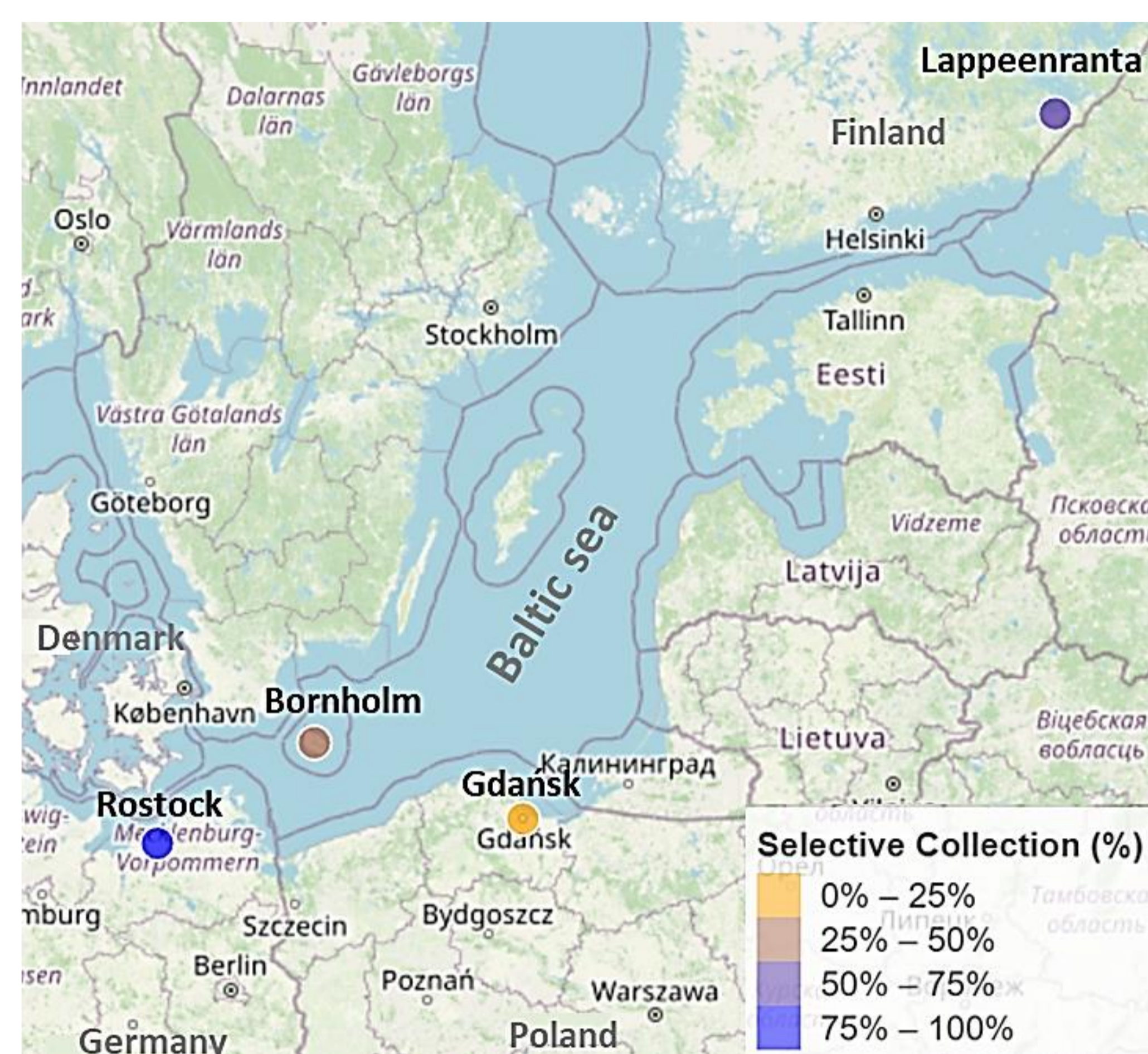


Figure 1: rate of selective biowaste collection in four cities located near the Baltic Sea

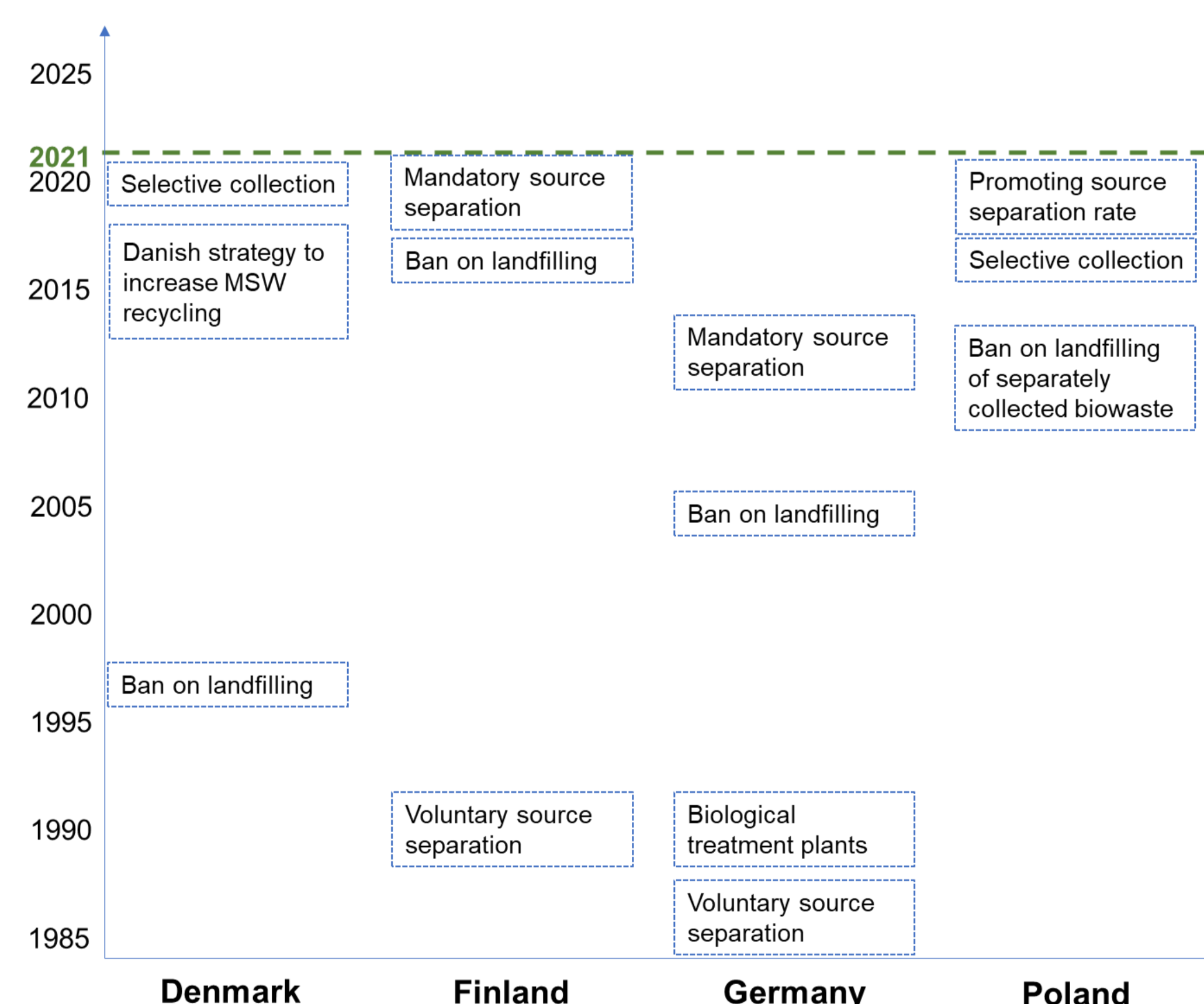


Figure 2: The national level regulation related to source separation of the biowaste.

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