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Regional Sustainability Challenges in Austria and Lithuania

THE CRITICAL 2334 HÄFELEKAR

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Introduction

This document provides a concise, harmonised overview of regional sustainability challenges in Austria and Lithuania. It is designed to inform vocational education and training (VET) educators, students, and partners working on sustainability, circular economy (CE), and related educational innovations.

Key terms used in this report

Circular Economy (CE): An economic system that designs out waste and pollution, keeps products and materials in use through reuse, repair, and recycling, and regenerates natural systems while reducing reliance on finite resources.

Domestic Material Consumption (DMC): The total amount of materials a country uses, measured in million tonnes, and often shown per person.

Circular Material Use Rate (CMUR): The share of a country's material use that comes from recycled sources.

Austria

Context and economy

Austria is a high-income European Union member state with a population of around 9.1 million. Its economy is dominated by services, which account for roughly 69% of gross domestic product (GDP), followed by industry at just under 30%. According to the European Environment Agency (EEA), Austria's Domestic Material Consumption is approximately 17 tonnes per person per year, placing it close to the EU average.

In 2021, around 1.1% of total employment was in sectors directly linked to the circular economy. Austria's circular material use rate is close to the EU average (11.5%), indicating moderate success in reintroducing recycled materials into production cycles.

Policy and strategies

Austria adopted its national Circular Economy Strategy in December 2022. Coordinated by the Federal Ministry for Climate Action (BMK), the strategy sets out a vision for transforming the economy and society into a climate-neutral, sustainable CE by 2050.

It aligns with the EU Circular Economy Action Plan and is supported by regular monitoring using Eurostat and EEA data. The policy framework also draws on Austria's wider climate and energy strategies, ensuring that CE goals are integrated with renewable energy targets, emissions reductions, and sustainable resource management.

Main sustainability challenges

Despite having a well-developed policy framework, Austria faces several structural challenges.

Progress in CE adoption is uneven between urban and rural areas. Large cities such as Vienna, Graz, and Linz lead in sustainable transport, building renovations, and renewable energy deployment, while smaller municipalities often have less infrastructure, fewer resources, and lower administrative capacity.

The energy transition shows strong results in renewable electricity generation but slower progress in heating and transport, especially in rural areas that remain dependent on fossil fuels. Grid expansion and permitting processes can delay the scaling-up of wind and solar power.

Circularity in practice is limited by weak secondary raw material markets, a shortage of repair and refurbishment facilities outside major cities, and inconsistent coordination between Austria's federal states (Länder).

Skills gaps are a recurring issue, particularly in reverse logistics, product lifecycle design, and circular process management, which are necessary to support CE initiatives across all regions.

Lithuania

Context and economy

Lithuania, with a population of about 2.86 million, also has a service-dominated economy, with services making up around 70% of GDP and industry just over a quarter. The country's Domestic Material Consumption is roughly 20 tonnes per person per year — well above the EU average.

In 2021, employment in CE-related sectors stood at 2.8% of total jobs, which is proportionally higher than in Austria. However, Lithuania's circular material use rate was only 4.1% in 2022, compared to an EU average of 11.5%, indicating a low level of recycled material reintegration into the economy.

Policy and strategies

Lithuania's transition to a circular economy is guided by the national "Guidelines for Transition to a Circular Economy by 2035." These guidelines set targets for increasing circularity, improving waste prevention, and promoting sustainable consumption and production.

The National Progress Plan (NPP) includes a goal to reach the EU average circularity rate. Implementation is supported by annual reporting: all relevant institutions submit progress data to the Ministry of Environment, which publishes a public summary by the end of April each year. A national digital CE monitoring tool is planned for launch by 2027, enabling better tracking of key indicators such as CMUR and DMC.

Main sustainability challenges

Lithuania's primary sustainability challenge is its low circularity rate combined with high material consumption. Much of the economy still operates on a linear "take–make–dispose" model, with limited uptake of design for repair, reuse, or long product life.

Regional disparities are also visible. While some municipalities are advancing climate adaptation and CE-related plans, others have slower progress due to limited resources or administrative capacity.

Another significant challenge is the availability of skills to support CE practices. There is a clear need to integrate sustainability competences into vocational and technical training so that small and medium-sized enterprises (SMEs) can adopt circular business models more effectively. Without these skills in the workforce, Lithuania's targets for recycling, secondary material use, and waste reduction will be harder to meet.

Comparative conclusion

Austria and Lithuania share several characteristics: both have service-dominated economies, recognise the importance of the circular economy, and have national strategies or guidelines in place. However, their situations differ in key ways. Austria's material use per person is lower, and its circularity rate is closer to the EU average, but it faces challenges in bridging the gap between urban and rural regions and in scaling up heating and transport decarbonisation. Lithuania has higher material use per person and one of the lowest circularity rates in the EU, with the main focus on raising secondary material use and integrating CE into production and consumption systems.

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