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XVIII International WoodEMA 2025 Scientific Conference

WOOD FOR THE FUTURE: INTEGRATING SUSTAINABILITY ACROSS INDUSTRIES

Ohrid, North Macedonia

September 17th-19th 2025

**Title of the paper: ESG AND THE FOREST-BASED INDUSTRIES IN SLOVAKIA:
THEORETICAL BACKGROUND AND IMPLEMENTATION CHALLENGES**

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Introduction

- ESG has shifted from **voluntary commitment** → **binding framework** (EU Green Deal, CSRD, CSDDD).
- Three pillars:
 - **Environmental**: climate action, resource efficiency
 - **Social**: labour rights, safety, diversity
 - **Governance**: ethics, transparency
- Forest-based industries = **strategic testbed** due to reliance on **natural resources & rural livelihoods**.
- In Slovakia, ESG is still new. Some companies are strong, but many are only starting.



EU Regulatory Context

- **CSRD & EU Taxonomy:** embedding sustainability into reporting & finance.
- **2025 Omnibus Simplification:**
 - Reduces reporting burden (esp. SMEs).
 - Streamlined ESRS → focus on quantitative metrics.
 - Assurance = limited scope; value chain capped.
- Balance between **EU ambition vs. sectoral feasibility.**
- The new EU rules make reporting **easier for small companies.** They can use simpler standards and focus only on the most important numbers.



First Reporting according to OMNIBUS, February 26





Structural Barriers

- Raw material volatility → climate change & biodiversity loss.
- High ecological footprint: energy-intensive, chemical-based processing.
- SMEs face cost & capacity barriers to adopt green chemistry.
- Misalignment between academic sustainability goals & industry priorities.
- Short product life cycles = weak carbon storage benefits.
- No innovation.



Innovation & Circularity

- Circular economy: cascading use, residue valorization, post-consumer wood.
- Technological drivers: AI in machinery planning, nanotech, low-emission adhesives.
- Engineered wood (CLT, LVL): carbon storage, energy efficiency.
- Potential: bioeconomy integration → low-carbon construction transition.



ESG: From Certification to Profitability

- FSC / PEFC: strengthen trust & market access.
- PEFC ESG Reporting Guide: links certification to ESG metrics.
- Investment trends: furniture sector (7.84% ROI) vs. forestry & paper (6.04%).
- Governance gaps:
 - Worker safety (subcontractors, vulnerable groups).
 - Clan cultures: trust & loyalty, but transparency deficits.
- ESG → proven correlation with resilience & profitability.



Conclusion

- ESG integration = evolving yet indispensable.
- EU regulations provide strong framework, but Slovakia faces structural, financial & informational barriers.
- Opportunities: grassroots governance, circular models, technological adoption.
- To succeed: systemic support for SMEs, simplified reporting, coherent policies.
- ESG not only compliance → strategic asset for resilience & competitiveness.



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Thank You

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