

**Nordic Association of Agriculture Science (NJF)**  
**Continuous international scientific conference**  
**“Challengers of Economics, Education and Society Development in the Nordic – Baltic Countries and beyond” organised by Section of Economy, Education and Society**  
**Programme for the virtual seminar on **June 1<sup>st</sup>, 2022 (Wednesday)****  
**12:00 to 13:30 Central European time (13:00 to 14:30 Eastern European time)**  
*The link for joining the conference event presented at the end of this programme*

### **Presentation 1**

**Title: Does Agri-environment participation help improve green productivity performance? Panel data evidence from Bavaria’s dairy farmers**

**Speaker: Amer Ait-Sidhoum, Natural Resources Institute Finland (Luke)**

**Author: Amer Ait-Sidhoum, Natural Resources Institute Finland (Luke)**

**Annotation:** This study presents an innovative empirical application to the assessment of Agri-environment measures on farm-level green performance. While existing research on schemes’ effectiveness has primarily focused on ecological aspects, it has been shown that the environmental effectiveness of the agri-environment policies cannot be assessed in isolation from the economic objectives. Using an enhanced version of the Malmquist–Luenberger productivity index with the consideration of nitrogen balance as an undesirable output, we investigate the effects of agri-environmental measures on farm-level green productivity. A propensity score matching and difference-in-difference procedures are used to estimate the policy effect, while the productivity measures are estimated using data envelopment analysis. The application focuses on a balanced sample of Bavarian dairy farms surveyed between 2013 and 2018. Results suggest that agri-environment scheme payments have a limited effect on improving farm-level green productivity. In contrast with previous works, we are able to show that AES participation has a differential effect on the green productivity components. More specifically, we find that the AES subsidies have positive impacts on technical efficiency change which can be interpreted as evidence of farmers’ success in optimally allocating resources over time, while the effects on technological change were found to be insignificant.

### **Presentation 2**

**Title: The impact of digital transformation on the sustainability of the Nordic-Baltic countries**

**Speaker: Inese Trusina, Latvia University of Life Sciences and Technologies**

**Authors: Inese Trusina and Elita Jermolajeva, Latvia University of Life Sciences and Technologies**

**Annotation:** The global challenges of the modern world require a transition from the existing linear economic model to non-linear dynamic models that will consider nature as a life support system for development on the way to social well-being within the paradigm of ecological economics and digital transformation.

The aim of the presentation is to show the results of a formalization of sustainable development monitoring using the power analysis approach in non-equilibrium dynamic socio-economic complex systems under condition of digital transformation. The authors carried out an assessment of sustainable development, analyzed indicators of sustainable development, and the level of digital and their correlation. When calculating the parameters, Eurostat data and UN databases were used. The authors presented the results and calculated data interpretation for the Nordic-Baltic countries – Sweden, Finland, Denmark, Latvia Lithuania, Estonia.

The sustainable development was reinterpreted in the context of the significance factors of the techno-economic paradigm is determined by the level of maturity of the economy of digital transformation, by the structure of energy and industry

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