6th ESP Europe Conference 2026

How food and landscape co-create ecosystem services? (X14)

9.00-12.30

Marta DEREK, Sylwia KULCZYK (University of Warsaw)
Luis INOSTROZA (Mendel University in Brno, Landscape Research Institute)

How food and landscape co-create ecosystem services?
PART 1

9.00-9.10	Marta DEREK Sylwia KULCZYK Luis INOSTROZA	Univ. of Warsaw Univ. of Warsaw Mendel University	Intro to the session
9.10-9.17	Marta DEREK Sylwia KULCZYK Luis INOSTROZA Ada GÓRNA Alina GERLÉE	Univ. of Warsaw Univ. of Warsaw Mendel University Univ. of Warsaw Univ. of Warsaw	**Nature's contribution to food. Is nature valued in local food studies?**
9.17-9.24	Floris HUYGHE Jeroen DeWAEGEMAEKER Marline KOOPMANS	Flanders Research Institute for Agriculture, Fisheries and Food	**The place of landscape features in a productive landscape - Analysis of the value creation of landscape feature introduction in an agricultural landscape**
9.24-9.31	Christos ZOUMIDES Adriana BRUGGEMAN Elias GIANNAKIS	The Cyprus Institute The Cyprus Institute Agricultural University of Athens	**Co-creating value in mountain agriculture: designing a voluntary quality label to co-produce ecosystem services and rural resilience in Troodos, Cyprus**
9.31-9.38	Julius MACIULAITIS Ieva MISIUNE Darijus VETEIKIS Lina EINENKEL Harald ZEPP	Vilnius University Vilnius University Vilnius University Ruhr Univ. Bochum Ruhr Univ. Bochum	**Changes in Co-Produced Ecosystem Services as Consequences of Land Reforms: Integrating Historical Data and Modelling Approaches**
9.38-9.45	Frédéric JOLY Philip ROCHE Hayo M.G. VAN DER WERF Aurélie WILFART	Univ. Clermont Auvergne National Research Institute for Agriculture, Food and Environment	**Allocating environmental impacts of animal-production to non-provisioning ecosystem services: relative merits of economic and biophysical approaches**
9.45-10.30		**DISCUSSION**	
10.30-11.00		COFFEE BREAK	
11.00-12.30		**How food and landscape co-create ecosystem services? PART 2**	

Julius Mačiulaitis[1], Ieva Misiunė[1], Darijus Veteikis[1], Lina Einenkel[2], Harald Zepp[2]

Changes in Co-Produced Ecosystem Services as Consequences of Land Reforms: Integrating Historical Data and Modeling Approaches

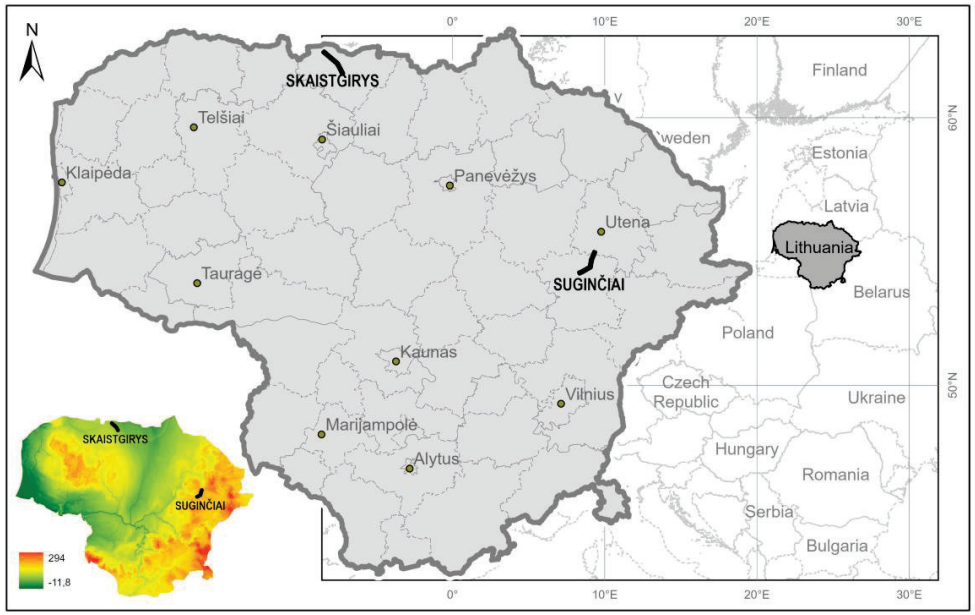

Fig. 1 Study areas: lowland – Skaistgirys, upland - Suginčiai

Territories of 1 km in width and 15 km in length, centered around a collective farm and extending into surrounding agricultural and natural areas.

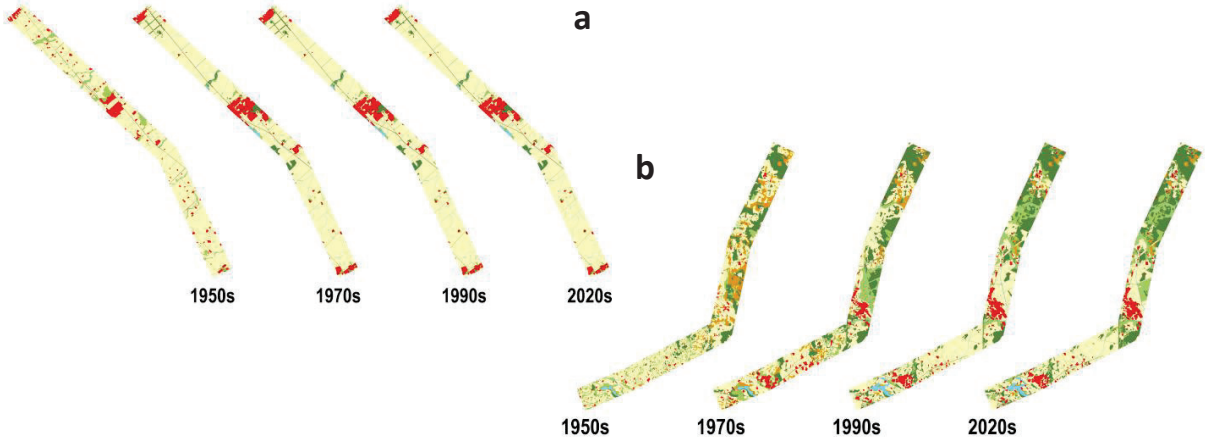

Fig. 2 Land-use/land-cover (LULC) change in: a – Skaistgirys, b – Suginčiai

- ❑ Political transformations of Lithuanian rural landscapes
- ❑ Contrasting lowland and upland regions
- ❑ Historical LULC reconstruction
- ❑ Comparison of ES assesment approaches

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ES dynamics in transformed landscapes (based on EnhancES modelling)

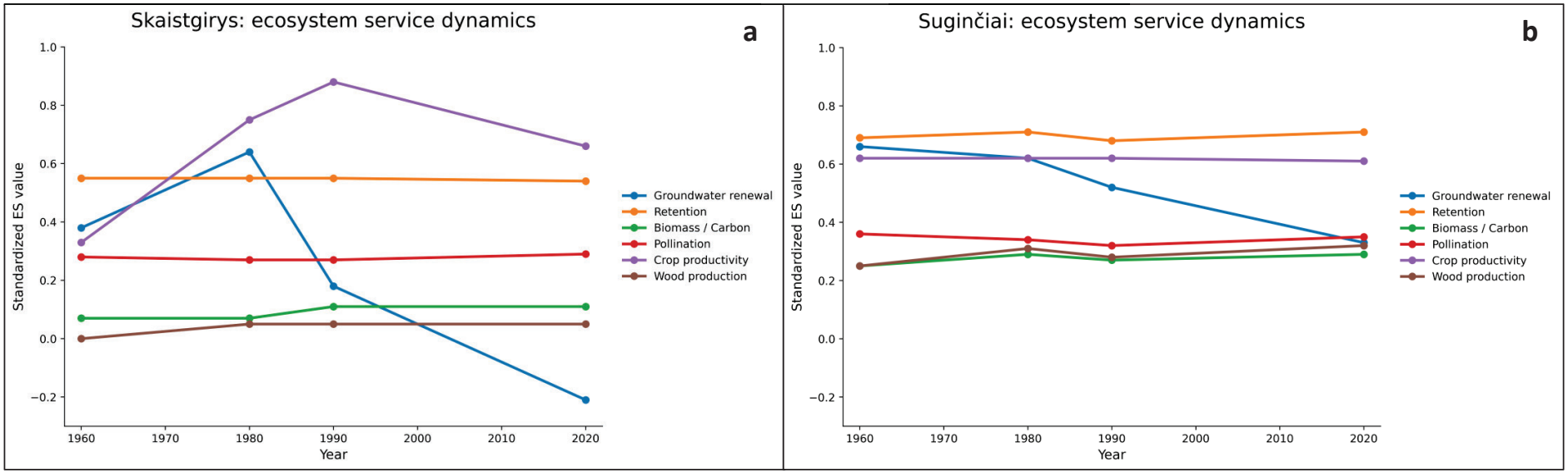

Fig. 3. Assessed ecosystem service dynamics: a – Skaistgirys, b – Sugінčiai

Skaistgirys (lowland):

- ❑ Increase in crop-production
- ❑ Declining groundwater renewal
- ❑ Afforestation increased wood production

Sugінčiai (upland):

- ❑ More stable multifunctional landscape
- ❑ Stable regulating ES
- ❑ Forest-driven biomass dynamics

Internal ES dynamics differed substantially between lowland and upland landscapes.

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Interpretation and take-away messages

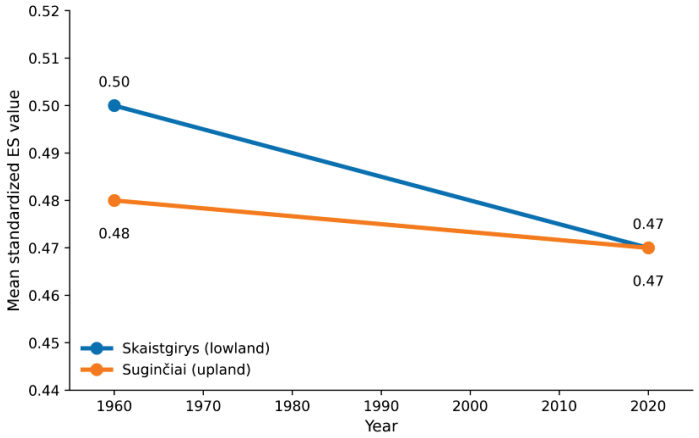

Fig. 4. Mean standardized ES values change

Different ES assessment approaches

Matrix scoring approach

- LULC interpretation
- Visual landscape structure
- Segment-based expert scoring
- Sensitive to spatial patterns

Quantitative EnhancES modelling

- Climate, soils, groundwater, LULC etc.
- Process-based modelling
- Aggregated ES responses
- More stable multifunctionality trends

- ❑ Different ES assessment perspectives
- ❑ Stronger ES shifts in the lowland landscape.
- ❑ More stable ES multifunctionality in uplands.

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