

# Exploring the role of structural and financial factors to implement Natural Small Water Retention Measures in agriculture: insights from a survey to practitioners

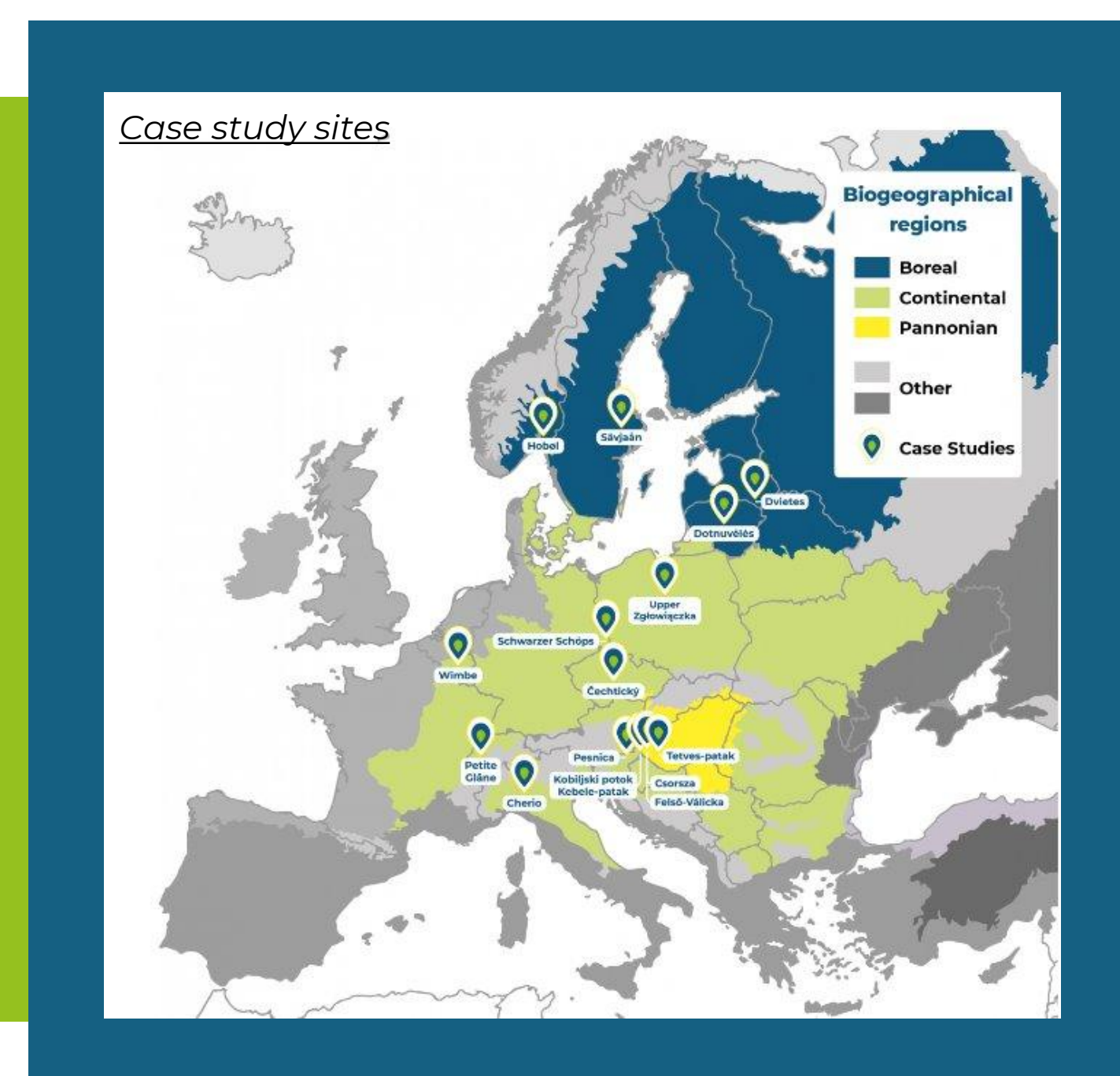
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## BACKGROUND

Agricultural production and farmers' income are increasingly threatened by climatic and environmental challenges. NSWORMs - leveraging natural processes for water and nutrient retention - can significantly mitigate these impacts. Farmers are key decision-makers in the adoption of these measures and show strong potential for promoting their wider uptake.



## ... BUT WHAT MOTIVATES THE ADOPTION?

Beyond personal beliefs and attitudes, farm structure, financial and technical support are expected to play important roles. A direct survey of practitioners gathered relevant data, and probability-based econometric models were used to identify the main factors driving the adoption of NSWORMs at real-world sites.

Variable	Logit Coefficient (SE)	Probit Coefficient (SE)
Constant	-2.1892* (1.2599)	-1.3257* (0.7287)
Training availed	-0.6586* (0.3513)	-0.3923* (0.2100)
Type of fertilisation	0.0595 (0.1983)	0.0348 (0.1201)
Type of labour	-0.9872*** (0.3446)	-0.5317*** (0.1707)
Experience in farming	0.0073 (0.0126)	0.0040 (0.0076)
Farm Size	-0.0033*** (0.0009)	-0.0020*** (0.0005)
Farm Size Squared	0.0000*** (0.0000)	0.0000*** (0.0000)
Role on the farm	0.6595** (0.2887)	0.3866** (0.1679)
Support availed	4.6558*** (1.0997)	2.6741*** (0.5912)
Advisory service availed	2.9016*** (0.9116)	1.7381*** (0.5109)
Flood problems	0.0267 (0.3700)	0.0131 (0.2257)
Drought problems	0.5309 (0.7475)	0.2982 (0.4506)
AIC	336.37	381.55
BIC	335.44	380.62

\*p<0.10, \*\*p<0.05, \*\*\*p<0.001

## FARM STRUCTURE AND FINANCIAL FACTORS MATTER

- **75 valid responses, 78 NSWORMs** addressed
- **Low baseline likelihood** of adoption without enabling factors
- **Financial support** and **advisory services** strongly increase adoption
- **Relying on family labor** limits the adoption
- **Farm size** plays a mixed role
- **Training** shows a counterintuitive effect
- **Farm ownership** encourages long-term investment in NSWORMs

## CONCLUDING REMARKS

Financial and technical support are confirmed as crucial for fostering resilient and sustainable agriculture. These findings point to the importance of targeted policy measures that enable wider adoption of NSWORMs.