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LAND ACQUISITION BY THE STATE FORESTS IN POLAND AS A TOOL FOR SPATIAL POLICY IMPLEMENTATION – ECONOMIC AND REGIONAL ANALYSIS

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ABSTRACT

The article examines the process of land acquisition by State Forests (SF) in Poland as a key element of active spatial policy in the years 2022–2025. The objective of the analysis is to assess the impact of these activities on land ownership structure and land use in rural and forested areas. The spatial analysis includes an examination of the distribution of transactions at the regional (voivodeship) and local (county) levels, considering correlations with forest cover and the presence of protected areas such as Natura 2000 and landscape parks. The economic aspect of the study focuses on comparing the acquisition prices of land by SF with market prices of agricultural and forest land, as well as identifying long-term price trends. Additionally, the study evaluates the environmental functions of the acquired land, analyzing its potential contribution to climate policy objectives and biodiversity conservation. The article concludes with policy recommendations regarding the effectiveness of the current land acquisition mechanisms and the potential need for modifications to the right of first refusal regulations, taking into account the perspective of sustainable development in rural and forested areas.

MATERIALS AND METHODS

The research was performed based on Qualitative Comparative Analysis (QCA) and covered 8 EU countries (Poland, Finland, France, Germany, Czech Republic, Spain, Italy, and Portugal), selected based on their diverse land acquisition models, data availability, and the representativeness of their spatial planning systems. The analysis included data from the years 2022–2024, focusing on the number and value of land transactions, their location near the Natura 2000 areas, and links to afforestation programs (RDP/CAP). The data were sourced from national institutions and international databases and were harmonized following the INSPIRE directive.

The EAI indicator enables a comparative assessment of countries in terms of land acquisition policies. The data were standardized using the min-max method and statistically analyzed (ANOVA, Kruskal–Wallis test, Spearman correlation). The country classification was performed using the k-means method and cluster analysis (Ward's method). The results were presented using radar charts and summary tables.

Key stakeholders were identified (forestry agencies, local governments, private landowners, NGOs), and influence–engagement matrices were developed. For each country, a phased diagram of the public land acquisition process (in the form of Gantt charts) was prepared, allowing for an evaluation of procedural efficiency and complexity.

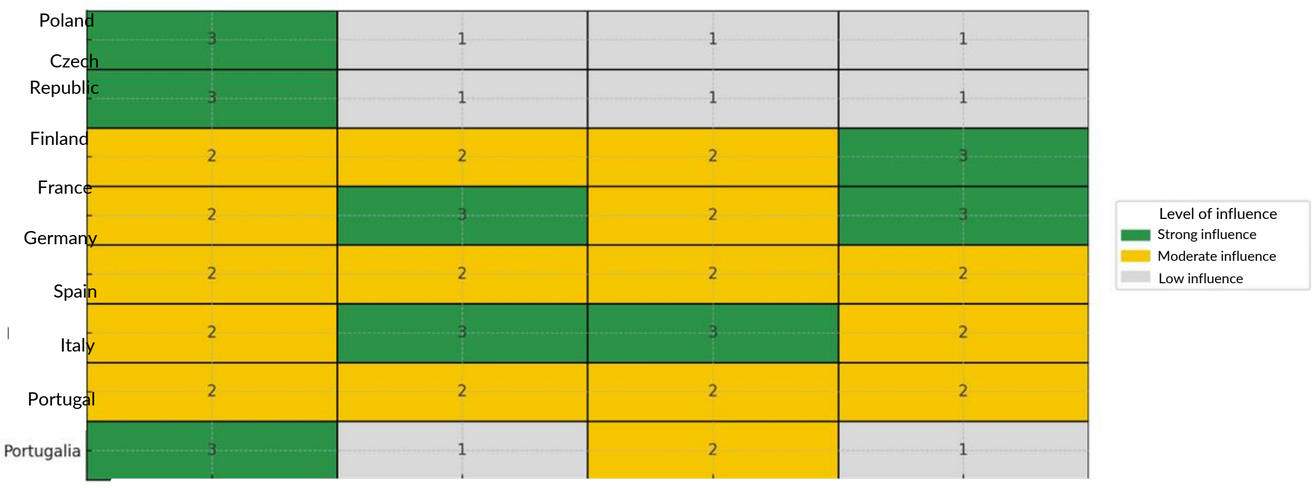
The chapter provides a robust methodology for both quantitative and qualitative analysis and considers the institutional context of implementing environmental policy within the EU.

To compare the intensity, cost-efficiency, and environmental orientation of public actions in forest land acquisition, an analysis of indicators W_1–W_5 was conducted across eight European Union member states: Poland, Finland, Germany, France, the Czech Republic, Spain, Italy, and Portugal. These countries represent diverse institutional models, varying levels of land management decentralization, and different traditions in forestry and spatial policies.

To better visualize the complex country profiles, a radar chart was developed to illustrate the five-dimensional structure of the indicators. This chart allows for a synthetic comparison of differences between countries and highlights the varying priorities of public policies—operational (PL, CZ), environmental (FI, FR), passive (ES, IT), and mixed (DE, PT). The shape of each indicator profile reflects not only the scale of actions but also their strategic orientation and degree of integration with environmental protection goals.

The process of land acquisition by public institutions in the EU relies on the interaction of various stakeholder groups, whose roles are shaped by legal frameworks, ownership structures, and the level of social participation. Four main stakeholder groups were identified: central institutions (e.g., forestry agencies), local governments, private landowners and heirs' property landowners, and non-governmental organizations. The level of influence was assessed on a scale from 1 (low) to 3 (high), and the results are presented in a matrix.

Table 4.5.1. Matrix of stakeholder influence levels in the analyzed EU countries (2022–2025)



INDICATORS

$$W_1 = \left(\frac{Acquired\ area}{Total\ area}\right) \times 100\%$$ (Proportion of the acquired area relative to the national land resource)

$$W_2 = \left(\frac{No.of\ transactions}{Population}\right) \times 100\%$$ (Number of transactions per 100,000 inhabitants)

$$W_3 = \left(\frac{Transaction\ value}{Acquired\ area}\right) \times 100\%$$ (Average cost of purchasing 1 hectare in Euros)

$$W_4 = \left(\frac{The\ Natura\ 2000\ area}{Acquired\ area}\right) \times 100\%$$ (Proportion of acquisitions located within the Natura 2000 areas)

$$W_4 = \left(\frac{Program-afforested\ land}{Acquired\ area}\right) \times 100\%$$ (Proportion of land originating from afforestation programs)

The indicators were normalized using the min-max method:

$$x' = \frac{x - \min(x)}{\max(x) - \min(x)}, x \in [0,1]$$

Additionally an Environmental Acquisition Index (EAI) was calculated:

$$EAI = \frac{1}{5}\sum_{i=1}^{5} W_i'$$

Figure 4.2.1. Normalized radar chart of indicators W_1–W_5 for selected EU countries in the years 2022–2025.

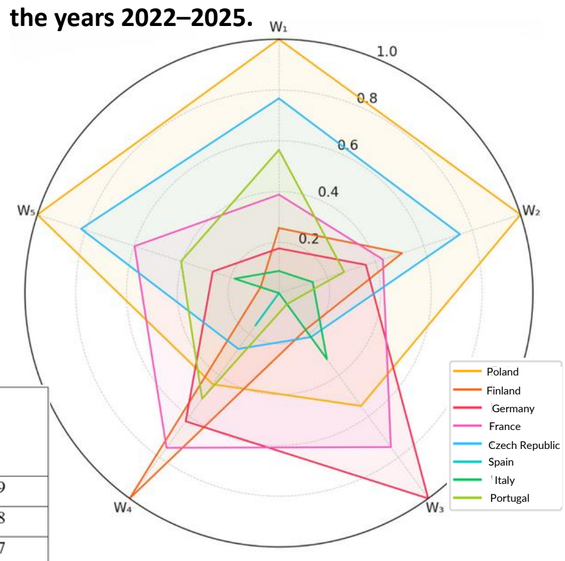


Table 4.2.1. Indicators W_1–W_5 and EAI for selected European Union countries in the years 2022–2025.

Country	W_1 (%)	W_2 (transactions/ 100,000)	W_3 (EUR/ha)	W_4 (% Natura 2000)	W_5 (% post-PROW)	EAI
Poland	85.0	14.2	8239	62.3	53.1	0.889
Finland	43.2	9.3	7200	89.1	21.4	0.758
Germany	38.7	7.8	9500	71.0	28.2	0.657
France	50.6	8.5	8800	77.2	39.3	0.739
Czech Republic	71.9	11.7	7300	54.0	46.9	0.839
Spain	28.8	4.2	6700	48.5	18.8	0.441
Italy	33.7	5.6	7600	40.9	25.1	0.486
Portugal	60.5	6.9	6850	65.7	32.7	0.604

Governance models vary across countries:

- Centralized model (PL, CZ, PT) – dominance of state agencies, limited role of other actors.
- Integrated and deliberative model (FI, FR) – strong role of local governments and consultative mechanisms.
- Decentralized model (ES, IT, DE) – significant involvement of local authorities and NGOs, but with greater procedural complexity.

The matrix shows that Central and Eastern European countries have the highest concentration of decision-making power, whereas, in countries with more developed participatory practices, the role of social dialogue and environmental integration is stronger—though at the cost of longer procedures.

The conclusion is that the effectiveness and acceptance of land acquisition policies depend on the choice of institutional model and the level of stakeholder cooperation. It is recommended that EU policies take these factors into account.

CONCLUSIONS

Analyses confirm that public land acquisition can be an effective tool for environmental and spatial policy, provided it operates within appropriate institutional frameworks and is integrated with landscape management goals.

The highest values of the EAI index are found in countries with a strong environmental focus and coherent institutional models (e.g., Poland, Finland). Decentralized countries (Spain, Italy) show lower efficiency due to dispersed responsibilities and weak monitoring systems.

Stakeholder analysis reveals that public participation (e.g., in France and Finland) may prolong decision-making processes but lead to better alignment with local ecological needs. Operational effectiveness depends less on total process duration and more on the structure and integration of key phases, especially planning and negotiation.

Empirical data indicate that public land consolidation—if linked to spatial planning—can support climate goals, biodiversity protection, and the reduction of urbanization pressure. However, its effectiveness largely depends on the quality of the institutional environment, including transparency, data availability, and legal stability.

Public land acquisition is playing an increasingly important role in landscape protection, ecological connectivity, and the integration of ecologically valuable areas into spatial planning—particularly in the context of the phasing out of afforestation programs and the withdrawal of private landowners from managing environmentally significant land.

The effectiveness of this instrument depends primarily on institutional quality, alignment with environmental goals, and administrative integration—rather than simply on the size or value of transactions. The best results are achieved in countries with transparent procedures and a clear environmental focus.

It is recommended to implement EU-wide monitoring frameworks based on common quantitative and qualitative indicators, and to promote best practices such as digitization, strengthening the role of local governments and NGOs, and supporting multi-level land governance.

Public land acquisitions should be treated as an adaptive tool for EU climate and spatial policies, requiring long-term coordination and transparent impact assessment mechanisms.