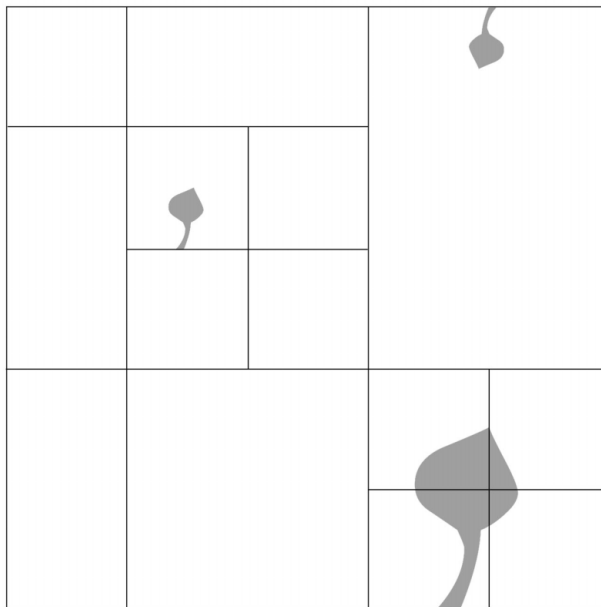


Extended abstract

*Neighbourhood Forests Communities
as an Opportunity for Sustainable Land
Management: The Case of Galicia, Spain*



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Highlights:

1. Neighbourhood forests communities (NFCs) of Galicia, Spain, are a singular private communal property.
2. Monoculture of fast-growing species for commercial purposes has undermined NFCs.
3. Good practices are identified in NFCs based on sustainable management and ecosystem services.
4. The NFCs provide a large part of the ecosystem services of Green Infrastructure of Galicia.
5. An inclusive composition of NFCs assemblies would complement environmental governance processes.

Abstract: The Neighbourhood Forest Communities (NFCs), self-managed organizations in Galicia, provide vital ecosystem services. Currently, 3.391 NFCs own approximately 20 % of Galicia's territory, historically organizing the collective exploitation and distribution of natural resources. The reforestation policy of the 20th century significantly affected the native mixed forest ecosystem, using monocultures of fast-growing foreign trees to replace them. In the last decade, some NFCs have identified forest ecosystem restoration as a priority. A survey of rural women's perceptions is conducted in order to obtain situated research, an assessment of public management support for the provision of ecosystem services based on the regulations developed and six model initiatives of sustainable NFCs are presented. It is concluded that the modest role of the NFCs within Green Infrastructure of Galicia does not advance in the same direction as the observed trend of their assemblies, towards conservation, protection and improvement of environmental quality.

Keywords: Gender, governance, ecosystem services, rural planning, green infrastructure.

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Extended abstract

1. Introduction and justification

Galicia, located in north-western Spain, has a distinctive settlement pattern characterised by more than 30,000 small villages, each associated with its own territory and relatively evenly distributed across the region. It is also characterised by abundant water resources, including a dense river network and significant groundwater reserves.

Traditionally, woodlands have provided essential resources such as pasture, manure, firewood and timber, playing a vital role in rural communities as part of a multifunctional agroforestry system. In Galicia, 22% of the territory is managed by one of the 3,391 Neighbourhood Forest Communities (NFCs), which collectively cover approximately 661,000 hectares.

NFCs constitute long-standing self-governing systems consistent with the principles outlined by Ostrom, characterised by collective ownership and management by local inhabitants. This model, unique at the national level and rooted in the Middle Ages, offers significant potential for sustainable natural resource management, the provision of ecosystem services, and climate change mitigation.

2. Objectives, methodology and sources

This research pursues two main objectives: (i) to assess the potential of NFCs as providers of ecosystem services; and (ii) to evaluate the extent to which current forestry policy supports this role.

To address these objectives, the study incorporates a survey examining perceptions of quality of life, social participation, and environmental awareness among rural women, adopting a holistic approach without isolating variables. The results highlight the relevance of NFCs in everyday life and confirm their social and economic significance in the sustainable management of the Galician territory.

In parallel, forestry policy was analysed through a review of the regulatory framework and its associated planning and management tools. Existing methodologies for valuing ecosystem services were also examined, given their importance for informing decision-making, promoting conservation, and increasing public awareness.

The ecosystem service potential of NFCs was further analysed within the framework of the Galicia Green Infrastructure (GGI) strategy, approved by the regional government, which aims to integrate spatial planning and resource management to enhance ecosystem services and climate resilience.

Additionally, six case studies of innovative NFC management models were selected to illustrate best practices in ecosystem service provision. This analysis is complemented by a gender perspective, focusing on the role of women in promoting environmental awareness within these communities.

3. Results

The survey addressed issues including representation, association membership, and economic activities. Participation was open to women residing in rural areas, making responses from NFC members particularly relevant, especially regarding their involvement in community assemblies.

The findings underscore the importance of NFCs and the natural environment in shaping women's well-being in rural Galicia. High levels of reported satisfaction support the relevance of research aimed at enhancing sustainability and quality of life in these communities.

Policy analysis indicates that, while recent progress has been made, forestry regulations have historically prioritised production and fire risk prevention over ecosystem service provision. Initiatives such as the GGI strategy represent a shift towards aligning forestry policy with broader sustainability objectives.

The economic valuation of ecosystem services highlights their significance: in 2023, NFCs generated over €400 million in ecosystem services, compared to approximately €70 million in market-based revenues. This disparity underscores the need to incorporate non-market values into policy and investment decisions, not only as a

strategy to address the environmental crisis, but also as a means of progressing towards a fairer and more equitable world.

Despite this potential, only 45% of NFC-designated land is currently included within the GGI. Across the 1.3 million hectares of the GGI strategy, covering 46% of Galician territory, NFCs are not proportionally prioritised, indicating missed opportunities for synergy.

Notwithstanding the dominance of timber-oriented management, several NFCs—such as Froxán, Covelo, Couso and Teis—have adopted diversified, community-oriented models and are recognised in the United Nations Environment Programme register of community-conserved areas. Additional examples include demonstration forests promoted by the Galician Forestry Association, such as Castelo and Mouriscados.

Moreover, a growing body of literature suggests that women's participation in governance contributes to stronger environmental awareness, social cohesion, and the development of innovative, socially responsible management strategies.

4. Discussion

A notable feature of the Galician context is the persistence of communal land tenure despite periods of legal uncertainty and state intervention during the Franco regime. Following decades of dispossession and afforestation policies favouring fast-growing species (1940–1970), communal lands were restored, transforming community–forest relationships.

This transition coincided with broader processes of industrialisation and agricultural specialisation, particularly in forestry and dairy production. Currently, increasing awareness of the risks associated with monoculture forestry—especially in fire-prone landscapes—has prompted a gradual shift towards more diverse and resilient management approaches.

Galicia has historically accounted for a disproportionately high number of forest fires in Spain, with species such as pine and eucalyptus contributing to fire propagation. In response, some NFCs are promoting native forest restoration, multifunctionality, and the preservation of cultural landscapes.

However, this transition remains uneven. While some communities are innovating, others continue to prioritise market-oriented production or face challenges linked to rural depopulation and limited management capacity.

While emphasising the diversity within the female gender and avoiding imposed stereotypes, the growing participation of women in community governance represents a significant shift towards more inclusive decision-making. This diversification of perspectives is particularly relevant in the transition towards multifunctional forest management. Nevertheless, the survey results are subject to limitations, as women's associations were a primary distribution channel.

5. Conclusion

The conservation of native forests is essential for sustaining ecosystem services at multiple scales. While many NFCs remain oriented towards traditional forestry practices, an increasing number are adopting multifunctional approaches based on ecological restoration and sustainability.

Incorporating ecosystem service valuation into planning and policy frameworks is critical to supporting these transitions. At the same time, addressing gender inequalities in governance structures is essential for achieving more inclusive and effective environmental management.

The resilience and adaptability of NFCs position them as key actors in future strategies for sustainable territorial development.

6. Future directions

Future research could adopt a more localised approach, focusing on specific NFCs through detailed, disaggregated analyses of recent developments. Strengthening communication and coordination between NFC representatives and the GGI strategy would also enhance integration and policy effectiveness.

Overall, the findings suggest a clear pathway for aligning community-based management and public policy towards shared sustainability goals.