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Agroforestry in the Algarve region, Portugal: Overview and farmers' perceptions

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Abstract

Agroforestry, a traditional practice in Portugal, could provide a sustainable pathway for the Algarve, a region increasingly threatened by desertification and water scarcity. This study evaluates the current state of agroforestry (extent, European, national, and regional policy, key informants and farmers perception) to assess potential and barriers to broader implementation. Results show that agroforestry occupies 18.1 % of the agricultural landscape of the Algarve region, significantly below the national average of 31.8 %. Traditional silvopastoral systems are most common, particularly the montado, alongside intercropping within permanent crop systems. Survey data reveal that 50 % of farmers (from a sample of 100) practice agroforestry, likely influenced by the high proportion of orchard farmers (70 %) in the survey who incorporate intercropping. Combined with a high percentage of respondents favouring intercropping in orchards (52 %), this finding points to an opportunity to diversify the region's monoculture orchard systems and mitigate land degradation. Although farmers recognise agroforestry's ecological benefits, barriers include high labour demands, financial constraints, bureaucratic complexity, and insufficient technical support. Current land-use datasets and policies focus too narrowly on traditional silvopastoral systems, limiting the full potential of agroforestry. This study recommends expanding agroforestry classifications to include all European Union recognised systems in both land-use datasets and policies. Furthermore, policy adjustments are needed to relax stringent eligibility criteria and reduce administrative burdens, making agroforestry more accessible to a diverse range of farmers. This expansion and adjustment are crucial to enhance the adoption of agroforestry, thereby promoting environmental sustainability and economic resilience in the face of escalating environmental challenges within the Algarve region. The findings highlight the necessity of a more comprehensive and inclusive approach to agroforestry implementation, emphasising the importance of addressing the specific needs and perceptions of local farmers.

Keywords: Agricultural policy, desertification, intercropping, monoculture diversification, silvopastoral systems, sustainable agriculture