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Assessment of ecosystem services of paddy rice best management practices in the Lower Mondego Valley, Portugal.

T. Vasconcelos[1], A. Mendes[1], E. Perucchini[2], J. Bulha[3], I. Duarte[1], P. Amador[1], J.M. Gonçalves[1], S. Corsi[2]

[1] Coimbra Agriculture School, Polytechnic Institute of Coimbra, CERNAS – Research Center for Natural Resources, Environment and Society, Coimbra 3045-601, Portugal
[2] Department of Agricultural and Environmental Sciences - Production, Landscape, Agroenergy, Università degli Studi di Milano, 20122 Milano, Italy
[3] Comissão de Coordenação e Desenvolvimento da Região Centro, Coimbra, Portugal
Corresponding author (e-mail): tvasconcelos@esac.pt

Abstract.
Ensuring the sustainability of rice cultivation requires farm practices that improve resource efficiency, reduce environmental impacts, and reinforce the provision of ecosystem services (ESS), including biodiversity conservation, landscape value, cultural heritage, and natural resource protection. The valuation and prioritization of ESS can help resolve conflicts among stakeholders, support compensation mechanisms, and promote sustainable ecosystem management, while ensuring that social values are properly reflected in policy development.

This study, conducted in the Lower Mondego Valley, Portugal, within the PROMEDRICE project, aims to assess ESS associated with on-farm Best Management Practices in paddy rice systems. Relevant ecosystem services were identified through the Gioia methodology (1991), applied to qualitative data collected from stakeholder interviews. This inductive approach enabled not only the identification of the most relevant ESS in the study area, but also the definition of key intervention pathways to enhance their provision within paddy rice systems.

The main ESS identified include habitat provision, biodiversity maintenance, water regulation, and biological control and pollination. By linking these priorities to feasible intervention pathways, the study provides an evidence-based framework to better align agricultural policies with farmers' and stakeholders' objectives, while reducing barriers to the adoption of more sustainable practices aimed at enhancing ecosystem service provision.

Key words: Paddy Rice, Sustainable Management, Ecosystems Services, Stakeholders Objectives