

Why Public Perceptions Matter for Policies on Invasive Alien Species in Aquatic Environments

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Effective management of Invasive Alien Species (IAS) requires a strong focus on social dimensions, as humans are both contributors to and potential solvers of the problem. Despite this, only a small portion of research on biological invasions addresses the human and societal aspects. This study, developed under the EU LIFE INVASAQUA project, used social science tools to explore public perceptions of IAS impacts in freshwater and estuarine ecosystems across the Iberian Peninsula, while also assessing the cultural and gender equivalence of a newly developed awareness survey. Results revealed that people perceive IAS impacts through two main lenses: an environmental domain (focused on biodiversity) and a societal domain (including socio-economic and human health aspects). However, this contrasts with how EU policies distinguish and regulate these areas, revealing a mismatch between public understanding and legislative frameworks. Differences in IAS awareness were observed between countries (Portugal and Spain), stakeholder groups, genders, and education levels. Country of origin was the strongest predictor of awareness, followed by education on biodiversity and socio-economic impacts, and stakeholder group for human health concerns. While the concept of IAS is generally well understood, with correct examples frequently cited, awareness of socio-economic and health impacts remains notably lower than that of biodiversity impacts. Perceptions of predation impacts were consistent across countries and groups, but other aspects varied. Interestingly, recreational angling was recognized both as negatively affected by IAS and as benefiting from species introductions. This study highlights the need for tailored awareness campaigns targeting specific social groups and underlines the importance of emphasizing the often-overlooked socio-economic and health impacts of IAS. Social science tools prove essential for validating survey instruments and ensuring alignment between public perceptions and policy design. Pre-legislative studies like this are crucial for bridging conceptual gaps and for better integrating the human dimension into IAS management strategies.

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