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Assessing traditional irrigation systems in data scarcity conditions, a proposal for a methodological approach.

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Traditional irrigation systems, apart from being an important cultural heritage element, are considered vital for sustainable water resource management and climate change adaptation measures. However, these traditional forms of irrigation and agriculture, with direct implications in food security at a local scale, have been suffering from abandonment or degradation worldwide. In light of this, the need to fully comprehend the complex linkage of their abandonment with different driving forces is essential. The identification of these dynamics enables the adoption of appropriate interventions with local initiatives and policies on a larger scale.

The present scientific contribution aims at presenting a valid methodology to consistently address the multidisciplinary and the multifacetedness that emerge in studies relating to traditional irrigation systems.

The methodological approach introduced regards that of system dynamics and is geared to outline a combined framework at the service of stakeholders and policy makers. This approach has been already adopted previously, in different studies to tackle down the complexity stemming from the heterogeneity of drivers in complex water-related and ecosystem modeling problems. Among its advantages there are its ease of implementation in any given scenario and its ability to integrate qualitative and quantitative assessments of multidisciplinary nature that can even be interconnected. Moreover, its applicability in cases affected by data scarcity allows to address issues in those areas of the world which often are more vulnerable, poorer and marginalized and which consequently suffer from a lack of interest in monitoring environmental and social variables, properly.

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