

## **Socio-Economic Modelling Approaches Linked to Water Quality: A Review**

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**Abstract :** Socio-economic modelling approaches linked to water management have contributed to impact assessments of agricultural policies and management practices on water quality at catchment level. With an increasing interest in informing water management policy that considers complex links between socioeconomic factors, climate change, agricultural production, and water quality, several models have been developed and applied in the literature to capture these relationships. This paper offers an overview of socio-economic approaches that have been incorporated within an integrated framework. It also highlights how data gaps on socio-economic factors have been addressed using forecasting techniques. Findings of the review show that while integrated frameworks have the potential to account for complexities within dynamic systems, they generally do not provide direct, measurable financial impact of socio-economic factors on biophysical water parameters that affect water quality. The paper concludes with a recommendation that modelling framework is kept simple to make it more transparent and easier to capture the most important relationship.

**Keywords :** financial impact, integrated framework, socio-economic modelling, water quality

**Conference Title :** ICWS 2022 : International Conference on Water and Sanitation

**Conference Location :** Istanbul, Türkiye

**Conference Dates :** March 21-22, 2022