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"Reconcile land system changes
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Applying the extended norm activation theory to predict farmers' groundwater conservation behaviour in western Iran

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Abstract

Groundwater resources in Iran, particularly in the agricultural sector, are undergoing a severe decline due to excessive extraction. Therefore, changing the behaviour of groundwater users has become essential and urgent in light of Iran's climatic conditions and the critical state of water scarcity. In this context, examining the psychological factors that influence farmers' conservation behaviours toward these resources is of critical importance. This study employed the extended norm activation theory to identify the predictors of groundwater conservation behaviour among farmers in western Iran. The present study was conducted using a cross-sectional survey design. Data were collected through a questionnaire, employing a multistage sampling method. The statistical population of this study consisted of 1,050 farmers from the Restricted Plain of Rumeshkan located in the western part of Lorestan Province, Iran. The sample size was determined to be 282 farmers based on Krejcie and Morgan's table. The reliability and validity of the questionnaire were assessed and confirmed. Data analysis was performed using Partial Least Squares Structural Equation Modelling (PLS-SEM). The findings revealed that awareness of consequences had a direct and significant effect on both ascription of responsibility and personal norms. Additionally, ascription of responsibility positively and significantly influenced personal norms. Furthermore, personal norms and self-efficacy exerted a direct and significant impact on groundwater conservation behaviours. However, the effect of self-efficacy on personal norms was not statistically significant. Overall, the model explained 34.9 % of the variance in conservation behaviour. These findings can inform policymakers, agricultural planners, and water resource management institutions in designing effective educational and support interventions aimed at enhancing farmers' conservation practices in response to the declining groundwater resources.

Keywords: Conservation behaviour, groundwater, Iran, norm activation theory, self-efficacy

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