



Tropentag, September 20-22, 2023, hybrid conference  
“Competing pathways for equitable food systems transformation:  
Trade-offs and synergies”

## Encouraging farmers’ response to climate change induced water stress through norm activation model among Iranian farmers

MASOUD YAZDANPANA<sup>1</sup>, TAHEREH ZOBEIDI<sup>2</sup>, LAURA WARNER<sup>3</sup>, KATHARINA LÖHR<sup>4</sup>, STEFAN SIEBER<sup>4</sup>

<sup>1</sup>*Agricultural Sciences and Natural Resources University of Khuzestan, Iran*

<sup>2</sup>*International Institute for Applied Systems Analysis, Cooperation and Transformative Group, Austria*

<sup>3</sup>*University of Florida, Agriculture education and communication, United States*

<sup>4</sup>*Leibniz Centre for Agric. Landscape Res. (ZALF), Sustainable Land Use in Developing Countries (Sus-LAND), Germany*

### Abstract

Adaptation to climate change is a key step for ensuring that food security and diversity of the food system. Adaptation strategies in farm level involve modifying farming practice, and water management practices. However, many farmers in developing countries still continue with traditional farming methods for various reasons and are not interested in implementing adaptive innovations strategies in their farms. Encouraging and directing farmers to use these strategies is a key factor to ensure food security and achieve sustainable development. The first step is to understanding current farmer perception and behaviour. Therefore, this research aimed to examine factors affecting farmers’ behavioural intention to adapt in Khuzestan Province, in southwest Iran. To achieve this goal, the current study examined applied the Norm activation model (NAM) to research the adaptation intention to climate change induced water scarcity of Iranian farmers. The data was collected through a cross-sectional survey from 250 farmers from Khuzestan, Iran. Structural equation modelling shows an excellent fit of the NAM model to the data with moderate explained variance of intention. The variance in behavioural intention explained through the NAM amounts to 33%. The results suggest that adaptation intention is influenced directly by personal norms ( $\beta = .575$ ,  $P = .000$ ). Aspiration and responsibility ( $\beta = .294$ ,  $P = .000$ ) and awareness of consequences of water scarcity ( $\beta = .186$ ,  $P = .014$ ) are two determinants of personal norm. Farmers’ personal norms could be activated by becoming aware about negative consequences of climate change such as economic and income problems, conflict between farmers, and health problems as well as through feeling responsibility for the consequences. It is more probable that farmers will be intended to do an adaptation strategy, when they feel they have a moral obligation to adapt. These results have broad policy implications that are intelligible to adaptation planning and development, notably through the amplification of personal or moral norms.

**Keywords:** Climate change adaptation, moral norm, moral obligation, responsibility