Climate Change' Beliefs and Risk Perception: A GenderPerspective from Iran

Ameneh Savari Mombeni[1], Masoud Yazdanpanah[2], Moslem Savari [3], Tahereh Zobeidi [4] and Stefan Sieber[5]

[1,2,3] Department of Agriculture Extension and Education, Agricultural Sciences and Natural Resources University of Khuzestan, Mollasani, Iran.

[4] Zanjan University, Dept. of Agricultural Extension, Communication and Rural Development, Iran

[5] Leibniz Centre for Agric. Landscape Res. (ZALF), Sustainable Land Use in Developing Countries (Sus-LAND), Germany

Introduction

- Climate change is one of the most important economic, social and environmental threats to human life and to sustainable development (Kittipongvises & Mino, 2015; Chaudhury, 2017). Although climate change affects the living conditions of all people, the poor and marginalized groups, especially rural women, are at greater risk (Davies et al., 2017; Van Aelst & Holvoet, 2016). There is undeniable evidence around the world that women are particularly vulnerable during and after sever weather events (Neumayer & Pluemper, 2007; Lambrou & Piana, 2006).
- Climate change' belief and risk perception are the preconditions for farmers' adaptation response (Poortinga et al., 2019; Krkoška Lorencová et al., 2019; Prokopy et al., 2015; Vainio & Paloniemi, 2013). in addition to understanding beliefs of climate change as well as perception of risks can assist decision-makers in supporting publicly preferable adaptation and mitigation actions (Lujala et al., 2015).
- Therefore, identify the perceptual and cognitive processes of farmers is very important to encourage adaptation to climate change. There is an assumption that men and women have different perceptions and consequently adaptive behaviours. Therefore, gender can be an important component for understanding the effects of climate change and responding to it, so there is a need to examine the Beliefs and perceived risks to climate change from a gender perspective.
- However, there is so far little literature that addresses the gender differences in beliefs and risk perceptions of climate change in rural areas particularly south west of Asia. This study examines Beliefs and perceived risks to climate change among male and female farmers through a qualitative approach.

Methods

- This study uses a qualitative approach to compare belief in climate change and perceived risk among men and women farmers.
- The study population in this study were farmers in the central part of Baghmalek county and the samples included 33 farmers including 18 male farmers and 15 female farmers. Sampling was purposeful.
- Therefore, informant farmers were purposefully selected and interviewed. This process continued until the data was saturated and no new data was available.
- Data were collected using semi-structured questions. People's conversations were recorded on an audio file and then transcribed on paper.
- Data analysis started from the time of the first interview and in parallel with the interviews (simultaneous analysis).
- In this study, in order to analyze farmers' perception on climate change and adaptation, all interviews were translated into text and after reviewing the interviews line by line, key concepts were extracted from it.

Results and Discussion

- The results showed farmers all acknowledged that climate change had occurred in their area. Both men and women believed reduced rainfall (20 respondents) and increased temperature (18 respondents) as the main signs of climate change.
- Men cite increased pests and plant diseases, increased drought, and drying up river water as other signs of climate change. While women consider the loss of vegetation in the region and the drying up of groundwater (wells, aqueducts, springs) as signs of climate change.
- In addition, climate change risk perception has varied by gender. Women perceived social problems such as loss of agricultural jobs (8 respondents), migration (6 respondents), and health (4 respondents), however, men mainly refer to livelihood and economic risks such as reduced access to healthy food (10 respondents), reduced agricultural yields (7respondents) and the increase of diseases (6 respondents).
- It seems, most men and women perception the occurrence and risks of climate change. Although there are similarities in the perceptions of the two groups, female farmers were mostly afraid of unemployment and the loss of agriculture, while men were concerned about the probability of declining incomes.

Conclusions

- It is suggested that the necessary training be provided to increase knowledge and empower women to change their position in society as a key to reducing harm and vulnerability to climate change.
- To increase women's influence in climate change policy and gender awareness, gender-sensitive education on climate change and climate change policy at the local, regional and national levels is also recommended.
- These results can be used as a basis for developing appropriate interventions to
- adapt to climate change in the agriculture sector.

References

1. Chandra, A., McNamara, K. E., Dargusch, P., Caspe, A. M., & Dalabajan, D. (2017). Gendered vulnerabilities of smallholder farmers to climate change in conflict-prone areas: A case study from Mindanao, Philippines. Journal of rural studies, 50, 45-59.
2. Davies, K., Adelman, S., Grear, A., Iorns Magallanes, C., Kerns, T., & Rajan, S. R. (2017). The Declaration on Human Rights and Climate Change: A new legal tool for global policy change. J. Hum. Rights Environ, 8, 217-253.
3. Kittipongvises, S., & Mino, T. (2015). Influence of psychological factors on climate change perceptions held by local farmers in the northeast of Thailand. Applied Environmental Research, 37(3), 69-78.
4. Krkoška Lorencová, E., Loučková, B., & Vačkářů, D. (2019). Perception of Climate Change Risk and Adaptation in the Czech Republic. Climate, 7(5), 61.
5. Lambrou, Y., & Piana, G. (2006). Gender: The missing component of the response to climate change (pp. 1-58). Rome: FAO.
6. Neumayer, E., & Plümper, T. (2007). The gendered nature of natural disasters: The impact of catastrophic events on the gender gap in life expectancy, 1981–2002. Annals of the Association of American Geographers, 97(3), 551-566.
7. Poortinga, W., Whitmarsh, L., Steg, L., Böhm, G., & Fisher, S. (2019). Climate change perceptions and their individual-level determinants: A cross -European analysis. Global environmental change, 55, 25-35.
8. Prokopy, L. S., Arbuckle, J. G., Barnes, A. P., Haden, V. R., Hogan, A., Niles, M. T., & Tyndall, J. (2015). Farmers and climate change: A cross-national comparison of beliefs and risk perceptions in high-income countries. Environmental management, 56(2), 492-504.
9. Vainio, A., & Paloniemi, R. (2013). Does belief matter in climate change action? Public Understanding of Science, 22(4), 382-395.
10. Van Aelst, K., & Holvoet, N. (2016). Intersections of gender and marital status in accessing climate change adaptation: Evidence from rural Tanzania. World Development, 79, 40-50.

Acknowledgment

Funding was provided by Agricultural Sciences & Natural Resources University of Khuzestan