Tropentag, September 14-16, 2022, hybrid conference

"Can agroecological farming feed the world?
Farmers' and academia's views"

Impact of the caste system and altitude on smallholder farmers' climate change adaptation strategies in Nepal

Giri Prasad Kandel[1], Miroslava Bavorová[2], Harald Kaechele [3], Bernard Kwamena Cobbina Essel[4]

[1] *Czech University of Life Sciences Prague, Fac. of Tropical AgriSciences, Dept. of Economics and Development, Czech Republic*
[2] *Czech University of Life Sciences Prague, Fac. of Tropical AgriSciences - Dept. of Economics and Development, Czech Republic*
[3] *Leibniz Centre for Agric. Landscape Res. (ZALF), Institute of Socioeconomics,*
[4] *Czech University of Life Sciences Prague, Fac. of Tropical AgriSciences - Dept. of Economics and Development, Czech Republic*

Abstract

Nepal belongs to the top four most vulnerable countries to climate change. It is at high risk due to the country's fragile topography, climate-sensitive and subsistence livelihoods of the people, and low adaptive capacity. Glaciers and mountain snow are melting more rapidly in Nepal, which increases the risk of GLOF, landslides, and floods. The study explores the awareness of farmers and their perceptions of climate change, its impact on farming, and adaptation strategies undertaken by the different caste groups in the area for coping with climate change impacts. The study was conducted in three districts from each agroecological zone of Nepal. Mustang district, Baglung district, and Chitwan district are selected from Nepal's mountain, hill, and plain regions correspondingly. To better understand the study area and local traditional adaptative strategies to cope with climate change, focus group discussion and self-field observation were performed. The data were collected through a structured questionnaire survey of 400 smallholder farmers using the recall approach for the past ten to fifteen years. The finding suggests that the farmers have perceived the change in climate pattern of the study area and its negative impact on farming. Farm households have been trying to cope with the impacts by adapting to alternate farming options and practices using traditional and modern techniques. Out of many adaptation strategies, crop diversification, off-farm activities, agroforestry, and temporary migration are broadly used to cope with climate change in the study area. According to our findings, those who belong to the top of the hierarchical caste system are more likely to adapt than those at the bottom of the hierarchy. Likely, the impact was perceived to be higher in the community living at a higher elevation compared to those at lower elevation. Even though individual adaptation strategies are adopted in the area, the vulnerability of farm households to the impact of climate change still occurs in terms of the lack of knowledge and financial resources.

Keywords: Adaptive capacity, caste system, climate change adaptation strategies, elevation, ethnicity, Nepal, smallholder farmers

Contact Address: Giri Prasad Kandel, Czech University of Life Sciences Prague, Fac. of Tropical AgriSciences, Dept. of Economics and Development, Kamycka 1281, 16500 Prague, Czech Republic, e-mail: kandelg@ftz.czu.cz