



Tropentag, September 9-11, 2020, virtual conference

“Food and nutrition security and its resilience
to global crises”

Climate Change Adaptation of Smallholder Tea Farmers in Ilam, Nepal

STEFFEN MÜNCH, MIROSLAVA BAVOROVA

Czech University of Life Sciences Prague, Fac. of Tropical AgriSciences - Dept. of Economics and Development, Czech Republic

Abstract

The government of Nepal intends to increase domestic production and export of tea (*Camellia sinensis*). Climate change effects have a negative impact on Nepalese agriculture, which employs 74% of Nepal's population. The identification of factors influencing the adaptation behaviour towards climate change among tea farmers in Nepal helps to reveal weaknesses and supports the successful implementation of the tea export strategy. Our research focused on the adaptation behaviour of 91 smallholder tea farmers in Ilam, one of Nepal's major tea producing districts. Approximately 87% of the respondents were aware of the term climate change. The average number of applied adaptation strategies by the farmers was three out of six proposed options. Adaptation measures such as crop diversification and soil conservation were used by most farmers. Strategies related to irrigation were implemented by only a few respondents. Agroforestry and the usage of more climate-resilient tea cultivars had a balanced share of whether being deployed as a coping strategy. By using multiple and binary logit regression we identified factors influencing the adaptation towards climate change. Socio-demographic variables did not show any statistically significant effect on the degree of climate change adaptation. However, information sources (other tea farmers, internet and extension services), as well as institutional factors (cooperative membership and credit access) positively influenced the degree of climate change adaptation among the sample. The main constraints to climate change adaptation were a lack of governmental support, insufficient information as well as no access to credits. Improved interaction between the government and the tea farmers is crucial for increased productivity of the Nepalese tea farming sector. In addition, easier credit access and the provision of effective extension services could support the farmers in adapting to climate change. Most participants were concerned about their future as tea farmers. Therefore, the need for further researching this climate-vulnerable industry is becoming inevitable.

Keywords: Coping strategies, barriers to adaptation, climate change impacts, Nepalese tea industry, tea export strategy