Factors Influencing the Adaptation towards Climate Change among Smallholder Tea Farmers in Ilam, Nepal

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Introduction

- Climate-smart agriculture (CSA): Focus on CC adaptation; Nepal´s agricultural production will require improved CSA approaches
- Climate Change (CC) is threatening the Nepalese tea industry
- Focus on the factors positively influencing adaptation behaviour towards CSA based on aspects of DOI.

Objectives

- Revelation of the respondents´ CC adaptation behaviour in terms of how many strategies and which specific strategies are applied.
- Identification of demographic, institutional and information source factors likely to influence the choice and extend of applying specified adaptation strategies towards CC.

Methodology

- Development of questionnaire: Adaptation, Information access, Economic performance, Sociodemographic aspects
- 91 completed questionnaires among smallholder tea farmers in the Ilam district
- Quantitative data analysis: descriptive statistics, Multiple regression, Binary logit regression

Results and Discussion

- Average number of adaptation strategies used by the tea farmers (min.1, max.6) was 3.
- Membership in a cooperative and training access had a positive effect on adaptation.
- Credit access, cooperative membership and training attendance: positive effect on agroforestry climate resilient cultivars.

Conclusion

- Necessity to focus on interaction between policy makers and tea farmers. Government should educate about the national tea export strategy.
- Educating cooperative representatives who should transfer the knowledge to tea farmers
- Improving access to training and to credits; providing information regarding irrigation of tea plantations

Figure 1: Summarized theoretical framework and basis for research design

Adaptation strategies in tea farming

- Crop diversification
- Rain water storage
- Water conservation with ponds
- Soil conservation
- Less climate sensitive cultivars
- Agroforestry

Factors influencing adaptation

- Institutional characteristics: access to credit, cooperative membership
- Socio-demographic aspects: age, gender, education
- Farm characteristics: size, farm elevation
- Information access: media sources, trainings

Figure 2: Usage of specific adaptation strategies among tea farmers

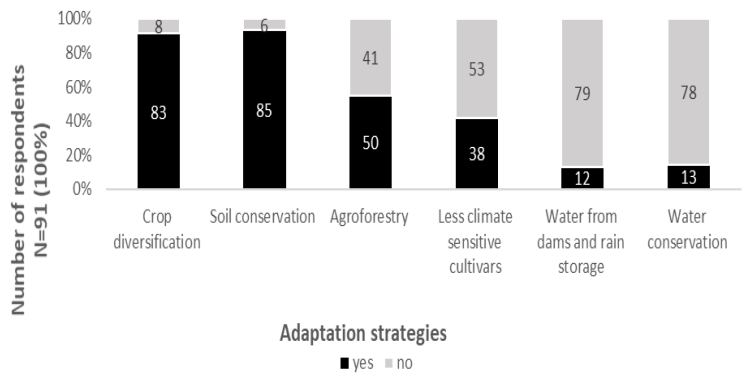

Table 1: Factors influencing usage of agroforestry and resilient cultivars

	Agroforestry (1)			Less climate sensitive cultivars (2)		
Variable	p-value	odds ratio	S.E.	p-value	odds ratio	S.E.
Access to credit	**0.008**	**8.104**	**0.783**	0.430	6.710	0.646
Cooperative member	**0.012**	**5.804**	**0.700**	**0.012**	**4.923**	**0.632**
Age	0.830	0.992	0.039	0.158	1.050	0.034
Gender	0.237	3.602	1.085	0.620	0.681	0.775
Education	0.226	0.877	0.108	0.194	1.117	0.085
Farm size	0.942	0.980	0.279	0.797	0.946	0.217
Farming experience	0.587	0.970	0.057	0.276	0.949	0.048
Farm elevation	0.491	1.001	0.002	0.446	1.001	0.002
Attendance in trainings	0.197	0.959	0.321	**0.041**	**1.705**	**0.272**
Inf. source: Internet	0.166	1.659	0.365	0.170	0.638	0.328
Inf. source: Other farmers	**0.027**	**4.128**	**0.642**	0.194	0.590	0.406