

Harmonizing Tradition and Climate Resilience: Traditional Food Practices for Food Security in the Himalayas

Dr. Suraj Das, Amity University, Noida, India

INTRODUCTION

Traditional communities are the stewards of 11% of the world's forests and 80% of the biodiversity on our planet through a combination of techniques and territorial management. For instance, pastoralism, shifting cultivation, mobility, hunting and gathering. The traditional community's food system produces various foods and resources while preserving and enhancing biodiversity (Steward 2007; Taylor 2005). The food systems of the communities are currently under unprecedented pressure from climate change, intensive agriculture, and migration despite having endured for many centuries. Understanding, honoring, and maintaining the food system employed by indigenous populations becomes crucial (Adhikari et al. 2019; Halloran et al. 2015; Lynn et al. 2013).

Traditional crops are vital in ensuring food and nutritional security amidst the challenges posed by climate change. Despite the gravity of this issue, there exists a noticeable gap in the literature concerning traditional food choices. The study aims to examine local perceptions regarding the repercussions of climate change and the significance of adhering to traditional food practices for sustainable nutritional security and sovereignty within the climate change context.

METHODOLOGY

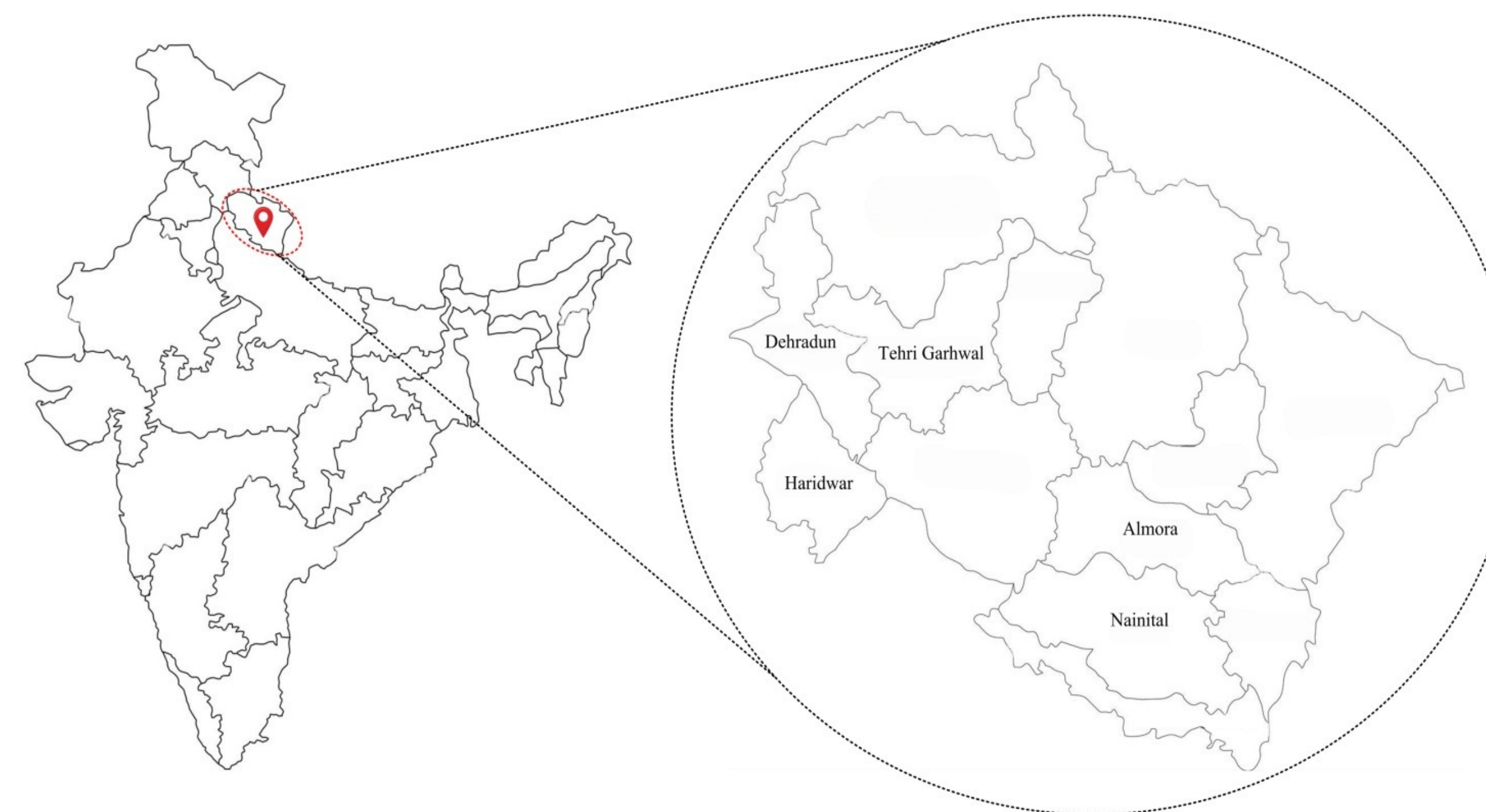
Study Design: From March to August 2021, data was collected for a cross-sectional survey in Hindi and English using pen and paper, through 210 household survey. This method is beneficial when a significant sample size is needed and may efficiently acquire data on a variety of topics (Campbell et al. 2014).

Sampling Technique: To get a representative sample of the population, we employed multi-stage sampling with disproportionate stratified random sampling approach (Baya et al. 2019; Belay et al. 2023).

Data Collection: The study collected the data using various methods, including surveys, semi-structured questionnaires, and a 5-point Likert scale.

Data Analysis: Thematic analysis through NVivo 12, is used to find patterns or themes in data, including interview transcripts and other sources of textual information (Braun and Clarke 2006, 2014). Further, the correlation between climate change and traditional food preferences was examined using the Statistical Package for the Social Sciences (SPSS) 24.

Western Himalayan Region, India



RESULTS

Specific correlation coefficients are represented by numerical values inside the table's cells, and they capture the connection between related pairs of assertions. These coefficients offer a quantifiable indicator of the strength of the correlation between statements 1 through 7. Through analysis, new patterns are revealed by significant relationships. Statement 2 ("Traditional diets reduce climate impact"), for instance, shows a notable positive association with statements 3, 4, 5, 6, and 7. It shows that traditional meals are compatible with ecologically sound farming methods, local climate change adaptation plans, cultural heritage preservation, ecological stress reduction, and species diversity. Positive correlations between statement 3 ("Traditional knowledge guides sustainable farming") and statements 4, 5, and 6 highlight the relationship between traditional knowledge and the advancement of sustainable agricultural practices, reliance on local resources for climate adaptation, and mitigation of ecosystem

Statements	1	2	3	4	5	6	7
Traditional foods support food sovereignty in climate change	1						
Traditional diets reduce climate impact	.247**	1					
Traditional knowledge guides sustainable farming	.203**	.641**	1				
Local reliance aids climate adaptation	.332**	.672**	.589**	1			
Promoting tradition preserves culture and security	.017	.085	.348**	.689**	1		
Traditional choices ease ecosystem pressure	.208**	.021	.298**	.632**	.634**	1	
Traditional diets conserve species, counter loss	.053	.143	.194**	.293**	.076	.341**	1

** . Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed). N=210

traditional crops serve as food sources and bearers of cultural beliefs, values, and coping mechanisms in the Uttarakhand region. They serve as examples of how people and nature may live in harmony, the value of sustainable agriculture, and the adaptability of local communities to environmental change

Crop	Traditional Usages	Climate Change Adaptation
Chulai (Amaranthus dubius)	Socio-cultural Beliefs	Drought-resistant & early-maturing crop (Bhatt and Bhatt 2005; Nautiyal et al. 2008a).
Mandua (Finger Millet, Eleusine coracana)	Staple crops and a part of traditional diets.	Drought-resistant & early-maturing crop (Joshi et al. 2015; Nautiyal et al. 2005).
Kodo (Kodo Millet, Paspalum scrobiculatum)	Used as whole grains for cooking.	Well-adapted to drought-prone areas; early maturing plant; (Maitra et al. 2022; Saxena et al. 2018)
Kauni (Foxtail Millet, Setaria italica)	Linked to local customs and rituals.	Well-suited to low rainfall conditions and exhibits good drought resistance (Kumar et al. 2021; Kumar 2010).

CONCLUSION

The findings of the study indicate a highly positive association between traditional foods, diets, knowledge systems, and several factors of sustainability and climate change adaptation. These findings imply that incorporating traditional crops and eating habits into contemporary agricultural and dietary frameworks may improve climate resilience, protect cultural heritage, and aid in ecological conservation.