IMPACT OF CLIMATE CHANGE ON HOUSEHOLD FOOD SECURITY OF JUMLA, NEPAL

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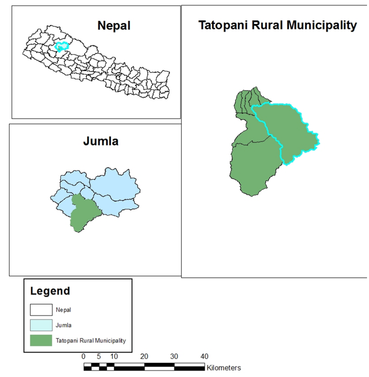
Introduction

- Climate Change, one of the most important global environmental problems.
- Nepal is largely dependent on climate-sensitive sectors, such as rain-fed agriculture; its fragile mountain ecosystems and dramatic topography.
- Mountain regions are particularly food deficit and more vulnerable to Climatic Stresses.
- Food security and nutrition is one of the most climatic-sensitive sectors in Nepal.
- Nutrition is more important for mountain people because of nature of work, topography and level of energy needed.
- The prevalence of under nutrition is comparatively higher in mountain areas than nationally.

Study Area



Key message

- 94% of the household perceived change in climatic indicators.
- 72% of the household are adopting autonomous adaptation.
- The household responded production decrease of traditional crops, cereals and livestock by 52.4%, 54% and 4% respectively.

Results

Comparison of climate change data and perception data of climate change

Attributes	Climatic data	Perception data	Finding
Average rainfall	Increasing trend with significant variation over the time	decreased	Household reported decrease in average rainfall while climatic data shows increasing trend in last 10 years. Climatic data shows that no of dry days were increasing so this may be one of the possible reason that households were responding the decrease in rainfall.
Average temperature	Increased	Increased	Both data shows increasing trends
Temperature in summer	Increased	Increased	Both data shows increasing trends
Temperature in winter	Increased	Increased	Both data shows increasing trends
Humidity (proxy for no of dry days)	Decreased	Decreased	Both data shows decreasing trends

Climate change and food security linkage

Dependent variables of food security		
Calorie intake	**Food variety**	**Dietary diversity**
Climate induced change in water availability	Climate induced change in water availability	Incidence of climate induced hazards
Perceived change in timing of seasons	Incidence of climate induced hazards	

*Also other non climatic variables were also included like household size, migrant sending household etc.

Conclusion

- Majority of household has perceived change in climatic indicator.
- Perceived change are consistent with hydro-meteorological data.
- Households are mainly taking autonomous adaptation measures.
- Despite taking adaptation measure 43% household are food insecure.
- Household perceived decline in production of crops, livestock and water availability. However, the level of climate change impacts are lesser on livestock and traditional crops (e.g. millets, barley and beans) compared to other crops.
- Climate induced changes (e.g. climate induced change in water availability, perceived change in timing of seasons, incidence of climate induced hazards etc.) are affecting household food security.

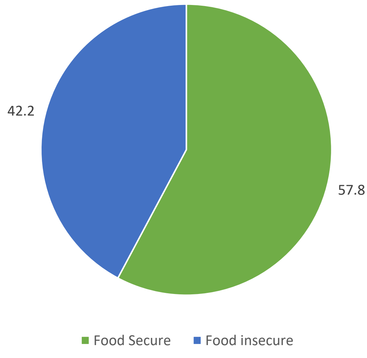


Figure : Percentage of food secure and insecure households