

PEOPLE PERCEPTION ON THE USE OF HOUSEHOLD COPING STRATEGIES AGAINST SHOCKS: A CASE STUDY OF FOREST RESOURCES USE IN GARHWAL HIMALAYA

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Abstract: The present study investigates the use of forest resources as well as other coping strategies opted by rural households against addressal of shocks in securing and sustaining livelihoods. Multistage random sampling was applied for selection of blocks, villages and households (the primary sampling unit) in Garhwal Himalaya. The primary data on the forest resource use and coping strategies against the different types of household shocks were collected from 454 households using semi-structured questionnaire followed by discussions with local people during 2014-2016. The primary results of the study revealed that the rural households practice different strategies to minimize the adverse effect of shocks and use of forest resources for addressing household shocks. The result estimates of the study will be helpful in framing policies regarding evaluation of shocks and also development of mechanism to minimize the impact of shocks at household as well as at community level in Himalayan region.

Keywords: Addressal of shocks, Coping strategies, Forest conservation, Sustainability

INTRODUCTION

Traditionally, forests are critically important assets for supporting rural livelihoods (Agrawal *et al.*, 2013) through supplying variety of products, services, and benefits for their use (FAO, 2005). The role of forest resources in household economies and for mitigating the poverty of rural areas in developing countries is important and also flagged as critical assets by the policy-makers around the globe (Das, 2010; Angelsen *et al.*, 2014). Moreover, it is pertinent to note that rural households adopt a range of strategies such as adjusting their household chores and managing natural resources to safeguard their livelihoods during adversities (Ellis, 2000). Forest resource use in Garhwal Himalaya has been examined by many researchers (Pandey, 2009; Sharma *et al.*, 2009), however, their characterization within the limits of mix of natural and man-made resources accessibility and availability has not been briefly assessed (Pandey *et al.*, 2014; Angelsen *et al.*, 2014). Moreover, forest resource use by rural inhabitants against the shocks has not been examined potently and addressed very intermittently and scanty manner in Asian region (Rahut *et al.*, 2016), though excellent work has been carried out in other parts of globe on the issue with acknowledging the mitigation potential role of forests in minimizing the impact of household shocks (Debela *et al.*, 2012; Kalaba *et al.*, 2013).

In this context to understand the use of forest resources as coping strategies in response to household shocks, the present study was undertaken with the hypothesis to evaluate use of various coping strategies used by households for addressing the household shocks. More briefly to confirm the

hypothesis and to understand the role of forest resources in rural livelihood, the present study attempts to analyze the various rural household shocks and forest resource based coping mechanism in response to shocks. The findings of the study will assist policy planners for the formulation of suitable policy and programmes for forest conservation as well as sustainable forest resource use strategy with focus on creating awareness about the diverse role of forests particularly during household shocks.

MATERIAL AND METHOD

The present study was carried out in two districts of Garhwal Himalayan region of Uttarakhand i.e., Rudraprayag (spread between 30°19' to 30°49' N latitude and 78°49' to 79°21' E longitude in an area of 2439 km²) and Pauri Garhwal (spread between 29°45' to 30°15' latitude and 78°24' to 79°23' E longitude in an area of 5230 km²). Primary data on rural household shocks and different coping strategies used during shocks was collected through household survey from 454 randomly selected rural households from randomly selected villages located in the range of 400-2200 m asl altitude of Pauri Garhwal and Rudraprayag district during the year 2014-2016. All the surveyed villages generally lacks in basic infrastructure such as road connectivity in terms of transportation, banking and hospital services due to remoteness.

A semi-structured questionnaire was developed and tested in collaboration with 53 households before the survey to collect data for addressing the various rural household shocks faced during last five years by rural households and the corresponding use of forest resources. Further the noted changes were made with

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respect to the requirement of study. The questionnaire consists two parts i.e., (i) Various household shocks (ii) Different coping mechanism to minimize the effect of shocks and forest resource use. Shocks can be defined as any situation or condition that affect human well being as well welfare mechanism (Dercon, 2002; Debela *et al.*, 2012). In the present study loan, unemployment and marriage were identified as shock based on pilot survey as well as available literature. In general loan can be defined as a situation of borrowing money from people or from other source which is to be returned back within a fixed period whereas unemployment creates shortage of money due to unavailability of job. During the survey households identified marriage as a shock due to involvement of huge amount of expenditure.

The respondents, generally the head of selected households were approached and face to face interviews were conducted by the first researcher at the informant's house, in Hindi or local dialect (Garhwali), as per the convenience of respondent. All informants interviewed were informed about the purpose of the interview and gave their oral consent for being interviewed. The descriptive statistics was analyzed using Statistical Product and Service Solutions (SPSS 21) software.

RESULT AND DISCUSSION

Household shocks

Rural households in the study region face various types of adversities (economically and socially),

influencing the household welfare mechanism as pointed out by villagers during survey. Most of the households reported that they were affected by more than one type of shock which has long term and short term disturbances on their livelihood mechanism. These disturbances were mitigated by various prevailing as well as new and innovative coping strategies. These strategies facilitate them to overcome from the situation and also assist to safeguard their welfare. Based on the study by Tongruksawattana *et al.* (2010) the shocks addressed by rural households were categorized into economic and social shock. In the present study various shocks observed were loan and unemployment under the economic shock whereas marriage under the social shock.

The study results show that the majority of the households reported that they were severely affected by marriage activities due to unemployment and loan. The number of affected households by shocks was addressed more in lower altitude. Households in the study region used different strategies to overcome the situation arising due to unexpected expenditure and damages or losses. The study results also show that the households were able to cope up with the adversities related to studied shocks. Altitude wise proportion of households using different coping strategies during shocks is provided in Table 1. Similar findings regarding the use of various coping strategies to minimize the effect of shocks have also been reported by various researchers for rural poor households of different parts of the world (Dercon, 2002; Fafchamps, 2003; Debela *et al.*, 2012).

Table 1. Households using different coping strategies during shocks

Parameter	Altitude	Shock type		
		Economic		Social
		Loan	Unemployment	Marriage
Affected households (in numbers)	Lower	24	38	58
	Middle	10	40	52
	Higher	6	12	23
Coping strategies (%)				
Internal resource use	Lower	16.7	42.1	93.1
	Middle	40.0	22.5	82.7
	Higher	16.7	25.0	95.5
Labour work	Lower	45.8	76.3	46.6
	Middle	70.0	97.5	55.8
	Higher	16.7	83.3	27.3
Forest resource use	Lower	16.7	44.7	91.4
	Middle	40.0	52.5	86.5
	Higher	0.0	41.7	95.5

Lower = 400-1000m, Middle = 1000-1600m, Higher = 1600-2200m

Coping strategies used during various observed shocks

In the present study results of the analysis reported that households adapt the situation first by using

mechanisms such as use of internal resource i.e., income saving, livestock for milk and meat, then by the engaging themselves in labour work as well as by the use of forest resources for maintaining livelihood security. Overall results reported that the use of internal resources and forest resources as coping

strategy was observed maximum during marriage followed by unemployment and loan while use of labor work as coping strategy was observed maximum for unemployment followed by marriage and loan (Figure 1).

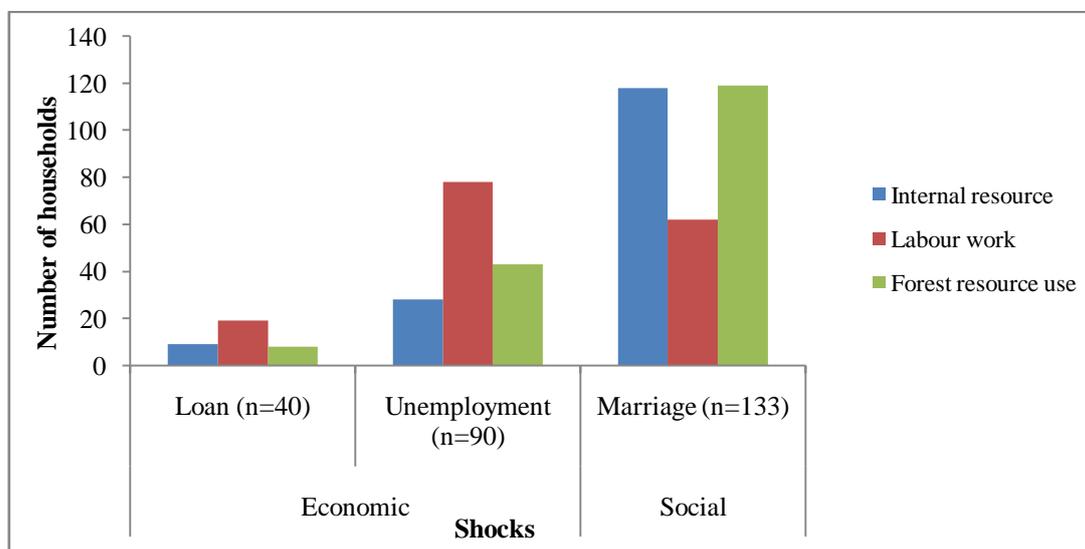


Figure 1. Overall number of households using different coping strategies during shocks

In India various researchers reported that forest are the base for rural livelihoods through providing various provisioning services help in subsistence and income generation (Saxena, 2003; Saha and Sundriyal, 2012; Banerjee and Chowdhury, 2013). Similar studies have also been reported by Arnold and Ruiz-Perez (1998) and Arnold et al. (2011) that agricultural communities worldwide use of forest resources for consumption purpose particularly during ecological. Most of the literature on forest based livelihoods has also highlighted the importance of forest resources to rural households in minimizing poverty particularly during lean season (De Beer and Mcdermott, 1996; Angelsen and Wunder, 2003; Rahut et al., 2016), or during shocks (Debela *et al.*, 2012; Kalaba *et al.*, 2013; Rahut *et al.*, 2016). Cavendish (2000) has also reported in a study that forests helps in providing employment to poor and contributes significantly to the rural economy particularly during adverse situations besides income generation.

CONCLUSION

The findings of the study revealed that rural households of Garhwal Himalaya use various coping strategies such as internal resource use, labour work and forest resource use during shocks. Though different coping strategies contributed to overcome the situations arising due to shock, but the use of forest resources as coping mechanisms was observed maximum to overcome the expenditure due to

marriage activities. Thus the results of the study conclude that forest contributions are important for rural people during adversities. The findings of the study will also be helpful in framing policies regarding shock evaluation and mechanism development to minimize the impact of shocks at household as well as at community level in Himalayan region.

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