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Socio-economic Profile of *Shina* Community Subsisting on NTFPs in Gurez Valley of Kashmir

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ABSTRACT

A field study based on structured interviews and quasi-participant observations was carried out to investigate the socio-economic and biophysical characteristics of Shina community subsisting on non-timber forest products (NTFPs) in Gurez valley of Bandipura district of Kashmir, India. The data were collected from 103 respondents drawn from 10 selected villages employing multi-stage random sampling technique having 5 per cent sampling intensity. The results indicated that majority of the respondents were middle aged having low literacy up to primary level and large sized families. The size of land holding was either marginal or small and the herd size varied from 6 to 10 livestock. Majority of the households possess labor force of > 3 workers, engaged mainly in cultivation or business with gross annual income upto ₹ 60001 to 90000 annum^{-1} and average NTFPs based annual income of ₹ 21336.56. The households were having proximity of <5 km to the forests, who visits the forests very frequently (62.14 %). The extent of forest resource possession among most (60.19%) of the households was < 0.10 ha. The collection, consumption and marketing of NTFPs play a significant role in the household livelihood economy of the Shina community. Hence, it is imperative to broaden the livelihood opportunities using existing NTFPs by framing a flexible forest policy which should give topmost priority not only to conservation but also in the development of strategies of poverty reduction and socio-economic upliftment of backward tribal people in the area.

Key words: Gurez, Livelihood, NTFPs, Shina tribe, Socio-economy

I. INTRODUCTION

Forests as one of most environmental and economic resources support the wellbeing of human societies. The direct and indirect provisioning services of forests and trees like food, nutrition, income, energy and shelter benefits rural people in developing and least developed countries [1;2]. Plant based non timber forest products (NTFPs) like coconut, mushrooms, and animal's bushmeat cover 0.6% (or 10.9 kg per capita) of all food consumption globally (FAO, 2014) which are highly nutritious diets [3]. In addition to direct consumption benefits, 2.4 billion people cook and 750 million people boil water with wood fuel as the only energy options to

reduce the risks of water-borne diseases (FAO, 2014). The tribal people inhabiting the forests areas carry a very long history of extraction of forest resources, for subsistence and/or sale [4]. Forest resources have been identified as one of key sources for livelihoods and food security of tribal households [5]. Since forest resources constitute the only natural resource that provides free access and subsistence to the poorest of the poor, they should really assume greater importance and receive priority for their development and management [6]. Several socioeconomic conditions that affect NTFPs dependency have been identified as access to forest and markets, wealth status, gender, education level and seasonality [7]. Rural people's dependence on forest resources may be influenced by proximity to the forest [8]. Understanding the socioeconomic aspects of NTFPs collectors and its significance in NTFPs based household livelihood economy necessitates for planning, implementation and execution of NTFPs based livelihood developmental programme. The significance of NTFPs in rural livelihood improvement and for subsistence has been established by a number of studies [9; 10], but little is known about their collection and marketing dynamics [11].

Kashmir harbours an incredible diversity of NTFPs which satisfy the social, economic, cultural, religious, ethical, traditional, spiritual, ecological and political aspirations of the human being from time immemorial. The NTFPs are used by the local communities to meet their daily livelihood needs in terms of foods, fuel, fodder and browse, utensils, ornamental and decorative items, musical instruments, furniture, fibre, medicines, dyes, thatch, brushes and brooms, religious and aesthetic goods, animal products, abiotic materials *etc*. Despite their huge potential, the contribution of NTFP's to local economy and employment is still insignificant. An effective management of the entire NTFPs exploitation is a key factor for successful commercialization of NTFPs in the global market which will enormously boost employment and income generation opportunities and improve the livelihoods of local people in the state. [12].

Thus against this backdrop, our study was an attempt to recognize the Socio-economic Profile of *Shina* Community Subsisting on NTFPs in Gurez Valley of Kashmir, as well as to understand the magnitude of NTFPs in improving households resilience. A very limited research has been recorded on this subject in past and present research is expected to bridge the gap in the literature, and also gather baseline information of tribal people to give database to the policy makers and planners in order to enhance their research development, and promotion

II. MATERIAL AND METHODS

2.1 Study area

The present study was conducted in Gurez Valley of Kashmir province in Jammu and Kashmir. The valley is situated at 34^0 23' to $34^0$41'N latitude and $74^0$37' to 74^0 46'E longitude at an altitude of 2370 meters above (MSL). The valley has an area of above 57842 hectares mostly mountainous with ranges of the Himalayas and situated along the almost east-west flowing Kishan-Ganga river. The Gurez valley embraces mostly rough topography and arduous accessibility. The Gurez's landscape inhabits 31912 people belonging to *Dard-Shina* tribe who are ethnically and culturally distinct from Kashmiris or Ladakhis but closer to the people of Gilgit

(Census of India, 2011). *Shina* tribe is the main community on both sides of the Line of Control (LoC) including Gurez valley and the language spoken is *Shina* which is steadily on decline. Main occupations of the people are agriculture, livestock production and NTFPs collection [13]. The climate is temperate and receives a heavy precipitation (snow) during winters which keeps the valley snow bound and cut off from the outside world for almost six months. The valley has rich dense coniferous and broad leaved forests.

2.2 Sampling technique and Sample

Multi-stage random sampling technique [14] was employed to select the blocks (3), villages (10) viz., Gulshanpora, Mastan-Khopri, Markoot, Shahpora, Barnai, Kilshay-payeen, Badugam, Husangam, Baduab, and Abdullan. The sample of 103 households was drawn from the sample villages having 5 percent sampling intensity using simple random sampling technique for the field study. The respondents interviewed were either household heads or eldest members.

2.3 Data collection and Analysis

The primary data were collected by the personal interviews of the respondents through a well-structured pre-tested interview schedule and quasi-participant observations. The interview schedule so prepared was employed to collect the data on socio-economic and biophysical characteristics of tribal people in Gurez valley subsisting on NTFPs for household livelihood economy. Suitable statistical tools like frequency, percentage, mean, standard deviation, range, were used for analysis of the data as per standard procedure suggested by [15].

2.4 Measurements of variables

The variables were measured as: age (chronological age in year), education (illiterate=0, below primary=1, Primary=2, middle=3, high school=4, intermediate=5, graduate & above=6), family size (small *i.e.* up to 5 members=1, large *i.e.* above 5 members=2), size of land holding (landless=0, marginal *i.e.* up to 1.0 ha=1), small *i.e.* 1.1 to 2.0 ha=2, medium *i.e.* 2.1 to 4.0 ha=3 and large *i.e.* 4.1 ha and above=4), herd size (no livestock=0, up to 5 livestock=1, 6 to 10 livestock=2, more than 10 livestock=3), occupation (wage labour=1, caste occupation=2, cultivation=3, business=4, service=5, any other occupation=6), family labour (1=1, 2=2, 3=3, >3=4), gross annual income (very low income *i.e.* up to ₹ 30000/ annum=1, low income *i.e.* ₹ 30001 to 60000/ annum=2, medium income *i.e.* ₹ 60001 to 90000/ annum=3, high income *i.e.* >₹ 90000/ annum=4), proximity to the forests (< 5 km, 5 to 10 km, 10 to 15 km, > 15km), forest visits (very frequently=3, frequently=2, occasionally=1, never=0) and forest resource possession (<0.10 ha, 0.11-0.20 ha, 0.21-0.30 ha, >0.30 ha based on the extents of farm/ homestead forestry) using the scale of [16]

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III. RESULTS AND DISCUSSION

3.1 *Socio-personal characteristics of Shina community*

3.1.1 Age

A perusal of Table .1 revealed that most of the respondents (62.14%) were middle aged followed by young (21.36%) and old (16.50%) age groups, respectively. The mean age was 41.40 years. The people in the age group of 31-50 years are the real earner group of the society bearing burden of the dependents [17:18]. The middle aged people are usually economically active, passionate, creative and hard working with more strength, vigour, zeal, aptitude and challenge [19].

3.1.2 Education

It could be observed from the Table (1) that maximum respondents (26.22%) were illiterate followed by high school (18.45%), below primary (16.50%), middle (12.62%), primary (11.65%), intermediate (8.74%) and graduate and above (5.82%). The mean score of education was 1.91 which indicated that low literacy quit prevalent in the surveyed population. The low literacy might be due to poor socioeconomic conditions of parents, lack of basic educational facilities, unawareness about the girl education, more involvement of boys and girls in livelihood earnings rather than towards education [20; 21]

3.1.3 Family size

The majority of the respondents (74.76%) were having large sized families and rest (25.24%) belonged to small sized families (Table.1). The mean score of 1.75 indicated the prevalence of large sized families in the surveyed populace. Consideration of child as an added asset to the family who can contribute by the way of labour and lack of knowledge of the benefits of small families might be the reasons for large sized families [22].

Table 1. Age, education and family size of the sample villages. (N=103)

Age		Education		Family size	
Category	**Household**	**Category**	**Household**	**Category**	**Household**
Young (up to 30 years)	22 (21.36)	Illiterate	27 (26.22)	Small (up to 5 members)	26 (25.24)
Middle (31 to 50 years)	64 (62.14)	Below primary	17 (16.50)	Large (> 5 members)	77 (74.76)
Old (> 50 years)	17 (16.50)	Primary	12 (11.65)	-	-
-	-	Middle	13 (12.62)	-	-
-	-	High school	19 (18.45)	-	-
-	-	Intermediate	09 (8.74)	-	-
-	-	Graduate & above	06 (5.82)	-	-
X = 41.40 S.D. = 14.20		X = 1.91 S.D. = 1.85		X = 1.75 S.D. =0.43	

Note: Figures in the parentheses indicate percentages, X= Mean, S.D. = Standard deviation

3.2 Economic characteristics of the *Shina* community

3.2.1 Size of land holding

The maximum respondents (57.29%) were marginal followed by small (28.15%), medium (11.65%) and landless (2.91%). The number of large farmers were nil (0.00%). The average score of landholding was 1.48 which indicated the prevalence of marginal landholders among the sample households.

3.2.2 Herd size

A view at the Table (2) indicated that 60.19 percent of the respondents possessed livestock's 6 to 10, followed by 19.41 percent of the respondents owning upto 5 livestock's, 13.60 percent of the respondents possessed more than 10 livestock and 6.80 percent of them were having no livestock's at all. The mean score of the herd size of the respondents was 2.74 which indicated that households possessing upto 6-10 livestock are prevalent. Owning a good number of livestock could be ascribed to the fact that livestock rearing was the most preferred secondary occupation [23].

Table 2. Size of land holding and herd size in the sample households (N=103)

Size of land holding		Herd size	
Category	**Household**	**Category**	**Household**
Landless	03 (2.91)	No livestock	07 (06.80)
Marginal (< 1.00 ha)	59 (57.29)	Up to 5 livestock	20 (19.41)
Small (1.01-2.00 ha)	29 (28.15)	6 to 10 livestock	62 (60.19)
Medium (2.01-4.00 ha)	12 (11.65)	> 10 livestock	14 (13.60)
Large (> 4.00 ha)	00 (0.00)	-	-
X = 1.48 S.D. = 0.73		X = 2.74 S.D. = 3.86	

Note: Figures in the parentheses indicate percentages, X= Mean, S.D. = Standard deviation

3.2.3 Main occupation

It is apparent from the Table .2 that cultivation remained the main occupation for (49.51 %) of the respondents followed by business (15.56%), wage labour (13.60%), service (10.68%), any other (5.82%) and caste occupation (4.85%). The mean score of main occupation were 3.23 indicating agriculture as the back bone of the economy. Moreover majority of the families either come from the farmer background or belong to the lower class which are mainly dependent on the agriculture activities for their subsistence. The families engaged in wage labour, business, service, caste occupation and other activities as their main occupation were also doing agriculture as their subsidiary occupation [18; 24].

3.2.4 Family labour

The number of workers in the family were categorized into four classes as 1, 2, 3 and >3 workers per family. The average score (3.38) indicated that the labour force among the sample households were substantial *i.e.* >3. The large family size boosts the substitution of family labour for hired labour which in turn reduces the cost of labour [25].

3.2.5 Gross annual income

It was noted from the surveyed populace that the considerable percentage (55.34%) of the respondents belonged to medium income category, followed by low income (23.30%), high income (18.45%) and very low income (2.91%). The average income of ₹ 89094.28 established the preponderance of families having medium annual income ranging between □ 60001 to □ 90000/ annum in the surveyed population. As cultivation remained the main occupation to the majority of the populace followed by livestock rearing, NTFPs collection and other employment sources which leads to the dominance of medium income category. Moreover due to the lack of basic infrastructure and arduous accessibility there is lack of proper marketing opportunities which lead the

youth to adopt cultivation as source of livelihood subsistence. Similarly, majority of the wage labourers are unskilled, they are not getting consistent income due to irregular employment and underpayment [26]

Table 3. Main occupation, family labour and gross annual income in the sample households (N=103)

Main occupation		Family labour		Gross annual income		
Category	**Household**	**Category**	**Household**	**Category**	**Household**	
Wage labour	14 (13.60)	1	06 (5.82)	Very low income (Up to □ 30000/ annum)	03	(2.91)
Caste occupation	05 (4.85)	2	21 (20.40)	Low income(□30001 to 60000/ annum)	24	(23.30)
Cultivation	51 (49.51)	3	33 (32.03)	Medium income (□ 60001 to 90000/ annum)	57	(55.34)
Business	16 (15.56)	>3	43(41.75)	High income (>□ 90000/ annum)	19	(13.21)
Service	11 (10.68)			-		-
Any other	06 (05.82)			-		-
X = 3.23 S.D. =1.28		X = 3.38 S.D. =1.00		X = 89094.28 S.D. =70467.79		

Note: Figures in the parentheses indicate percentages, X= Mean, S.D. = Standard deviation

3.3 Biophysical characteristics of the Shina community

3.3.1 Proximity to forests

From the study it was apparent that maximum (45.63%) of households having<5 km proximity to the forests followed by 5-10 km (28.15%), 10-15 km (18.45%) and >15 km (7.77%). The average proximity to the forests among sample households was observed to be 6.14km. Such an adjacent prevalence of people in and around the forests are because the area is having an undulated topography mostly covered by hills and having arduous accessibility that can be the reason NTFPs collections were the 3rd important component of livelihood subsistence. The findings of the present study are similar to those of [27] which stated that the women living at the proximity of the natural forest depend highly on the forest to extract many NTFPs.

3.3.2 Frequency of forest visits

The maximum (62.14%) of the households visited the forests very frequently followed by frequently (22.33%), occasionally (10.68%) and never (4.85%). The mean score (2.37) of frequency of forest visits indicated that the people visit the forest frequently (fortnightly/ monthly) in the study site. The main reason of local populace to visit forests very frequently is the close proximity to forests, which helps them to get the daily livelihood subsistence from it. Also due to the lack of proper market, remoteness, limited transportation facility, and improper roads the locals are driven towards forests to derive their day to day needs.

3.3.3 Forest resource possession

That extent of forest resource possession *i.e*. area owned under agroforestry/ homestead forestry plantation was mostly (< 0.10 ha) among maximum (60.19%) of the households followed by 0.11-0.20ha (21.36 %), 0.21-0.30 ha (11.65 %) and > 0.30 (6.80 %). The average extent of agroforestry/ homestead forestry plantation among the sample households was recorded to be 0.10 ha. The extent of forest resource possession directly affects the

dependence on forests as higher the forest possession means more availability of fuel wood, fruits, vegetables, herbal medicines and low dependence on forests for livelihood subsistence. The findings of the present study are similar to those of [28]

Table 4. Proximity to forests, frequency of forest visits and extent of agroforestry/ homestead forestry of the sample households (N=103)

Proximity to forests		Frequency of forest visits		Forestry resource possession	
Category	**Household**	**Category**	**Household**	**Category**	**Household**
< 5 km	47 (45.63)	Very frequently	64 (62.14)	< 0.10 ha	62 (60.19)
5-10 km	29 (28.15)	Frequently	23 (22.33)	0.11-0.20 ha	22 (21.36)
10-15 km	19 (18.45)	Occasionally	11 (10.68)	0.21-0.30 ha	12 (11.65)
> 15 km	08 (7.77)	Never	05 (4.85)	> 0.30 ha	07 (6.80)
X = 6.14 S.D.=4.84		X = 2.37 S.D. =0.88		X. = 0.10 S.D. =0.11	

Note: Figures in the parentheses indicate percentages, X= Mean, S.D = Standard deviation

IV. CONCLUSION

The study led to the conclude that even living in the area having a very rich diversity of NTFPs, the *Shina* community in Gurez valley are living underprivileged conditions in all aspects as depicted by their socio-economic profile. Today when the India is heading towards a "Digital India" movement, the people of Gurez valley are isolated from the rest of the world because of the lack of basic amenities of life like electricity, proper market, inaccessible roads, given the proximity to the border, there is no mobile network. The present prevailing situation led to the aftermaths like migration, acute poverty, debt, substandard life quality, lack of awareness and exposure, isolation from national mainstream traditional severity etc. In such circumstances forests play a crucial role in the socio-economic and cultural systems and livelihoods of a majority of the *Shina* community. The forest based livelihoods mainly involve NTFPs collection, processing and utilization/ selling of various forest resources. As the area having a cornucopia of forest resources, the livelihood diversification using existing forest resources should be given topmost priority as important strategy of poverty reduction and socioeconomic upliftment of backward tribal people.

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