Indian Journal of Extension Education
Vol. 54, No. 2, 2018 (5-12)

Well-Being Status of Tribals Dependenton Shifting Cultivation in Dhalai, Tripura

D.K. Pandey[1], H.K. De[2], P. Adhiguru[3]and Mahesh Pathak[4]

ABSTRACT

This study provides an important empirical insight into well-being status of *hill people* of Dhalai, a remote hill district of Tripura, North Eastern Region (NER) of India *whose livelihood primarily* depends on Shifting Cultivation (SC). Using a resilience approach, 50 *tribal* households were interviewed with the help of structured interview schedule. With regard to psychological well-being, about 92% households has perceived it to be moderate or inconsistent and are experiencing difficulties as on date and is expected to continue with it in the near future. In case of economic well-being, 86%households were under poverty trap with high income inequality. Findings also revealed transition in terms of aversion of tribal youths to SC, declining dependency on SC, overdependence on Non-Timber Forest Produces, higher inclination towards settled cultivation with preferences for high value horticultural crops. Food security was found ensured among hill people *and significant proportion of total expenditure was devoted on education & health.*The authors suggest that the policy and political alternatives of mainstream prescriptions for hill people in Dhalaiwhich has hitherto focused on the narrow issue of shifting to settled cultivation should shift its emphasis to diversification of economic activities in the tribal regions for improving people's well-being and natural resource management.

Keywords: Inequality, northeast India, shifting cultivation, tribal, tripura, well-being

INTRODUCTION

Pursuing the primary goal of society and sustainable development has always remained the priority focus of human well-being (Helne and Hirvilammi, 2015). As a result, the well being of human were accorded main focus of public policies and interventions which also matched with international development agenda of Sustainable Development Goals (SDGs) adopted in September, 2015. Societal progress is the function of people well-being and households which could be assessed by the functioning of the economic system *vis-a-vis* the diverse experiences and living conditions of people. As a result, enhancement of people well-being has assumed the magnified significance of the public policy objectives (NEF 2009; OECD, 2013; Eurofound 2013; NAS, 2013). It is also a matter of fact that the low-income societies tend to translate the economic growth into large gains in their life satisfaction only if the resources generated by growth are used to satisfy their basic needs as established by Schor (1998). Inclusive growth has become the core developmental paradigm across the economies. The above philosophies were further consolidated when economic reforms were initiated in early nineties, which focused on development and planning towards enhancement of human well-being, reduction in inequalities and growth of per capita income especially among the vulnerable social groups. Furthermore, the concept of welfare state addresses the issues like minimizing

[1]College of Horticulture & Forestry, Central Agricultural University (Imphal), Pasighat, Arunachal Pradesh, [2]ICAR-Central Institute of Freshwater Aquaculture, Bhubaneswar, Odisha, [3]Indian Council of Agricultural Research, KAB-1, New Delhi, [4]*KrishiVigyan Kendra*, East Siang, Arunachal Pradesh.

inequality, socio-economic justice, political democracy and so on and this provision is as per constitutional commitment. Hence, the established governments take necessary steps for equitable distribution of resources, improving quality of life of people, development of infrastructure and creation of affordable rural amenities. Accordingly, the Indian Government has initiated several anti-poverty flagship programs for socio-economicupliftment of their citizens. In addition, to address regional imbalances and community-specific problems several rehabilitation/developmental schemes and legislation viz., Backward Regions Grant Fund Programme (BRGF), Watershed Development Projects, Soil conservation schemes, SC Control Projects, New Land Use Policy Scheme etc (Tiwari, 2014) and the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 enacted by the parliament of India to recognize and vest the forest rights and occupation in forest land in forest dwelling Scheduled Tribes and other traditional forest dwellers. Therefore, for sustaining the credibility and accountability of public policies and the very functioning of democracy, such perceptions need urgent redressal (OECD,2013). Literatures are scanty about well-being of people particularly remote community practicing shifting cultivation. Both the scientific community as well as governmental bodies faces the hurdle of limited data. Hence, the present study was undertaken to empirically examine the socio-economic status, household income and expenditure pattern, information access, preferred diversification choice, challenges and status of overall well-being of the tribal communities whose livelihood currently depends upon SC.

METHODOLOGY

Study area

The present study was conducted during 2016-17 in Dhalai district (23° 50' 48.1128'' N and 91° 54' 35.73'' E) of Tripura state in North East India. The district is largely a tribal district with 56% tribal population and overwhelming 76% of the workers are dependent on agriculture for their livelihood (GoT, 2016). This remote district has a low human population density (158 people per km^2, Chandramouli 2011) and a relatively high forest cover of about 80% (FSI, 2011). The major tribes are *Tripuri, Reang, Kuki (Halam/Darlong/Hrangkhawl), Koloi*and*Chakma*. *Reangs* are one of the Primitive Tribal Groups (PTG) as classified by the Govt. of India. It is the only resource poor district in Tripura currently receiving funds from the Union Government under the Backward Regions Grant Fund Programme since 2006 (Anonymous, 2014) to redress regional imbalances in development by providing funds for supplementing and converging existing developmental inflows.

Data collection& analysis

The Dhalai district of Tripura administratively divided into 8 Rural Development Blocks. Using random sampling methodfifty (50) tribal households form 15 village clusters of 2 Blocks namely; Ambassa and Ganganagarwere selected for the present study. A structured interview schedule was used to collect relevant qualitative and quantitative data from the respondents. The survey schedule consisted of important socio-economic determinants of objective well-being like age, educational attainment, family size, media usage, income and household expenditure pattern. To ascertain the opportunities and challenges in shifting cultivation (SC) system and to understand the benefits of ongoing rural development schemes in the study area, focused group discussion with key informants were also conducted in relation to well-being influence of different schemes. To measure objective well-being of respondents, the important socio-economic determinants of well-being viz. age, educational attainment, family size, housing status, income & expenditure pattern were incorporated in survey schedule. Poverty was measured using the World Bank assessed international poverty line criteria of 2015. Further, to study subjective well-being the Cantril Self-Anchoring Scale (Cantril, 1965) was used to measure respondents' subjective well-being as it measures well-being nearer to the end of the range indicating assessments of life or life appraisal (Diener *et al.,* 2009). The grouping pattern formed by Gallup

(2009) was adopted for interpretation of results. Diversification preference was measured using 5-point Likert scale and challenges were assessed using 3-pointLikert scale developed for the study.

RESULTS AND DISCUSSION

Socio-economic well-being determinants of the respondents

It has been postulated that increased socio-economic status co-varies with increased levels of subjective well-being. In turn, subjective well-being has antecedence of physical and mental health (Nettle, 2005) Therefore, socio-economic inequalities in well-being studies capture the degree to which well-being is (un)equally distributed in the population, by socioeconomic status (Weaver, 2015). The Socio-economic determinants to respondents' households sampled from 50 households are presented in Table 1.

It was found that majority of the respondents engaged in SCwere from middle aged group (78%) followed by old aged group (18%). Maximum of the respondents (52%) had primary level education whereas, 48% were illiterate. Majority (84%) of the respondents had medium family size *i.e.* about 4 members per family. None of the respondents owned Cement Concrete roofed house and majority (74%) had houses of thatched roofs with mud walls.Out of total respondents maximum (58%) had dependency on SC in range of 50 to 75% whereas, 28% respondents depend on it to the extent of 75 to 100%. Poor social participation (16%) was found among the

Table 1: Status of socio-economic well-being determinants among the respondents

Variables	Frequency	Percentage	Mean	SD	CV
Age					
Young (18-35) yrs	2	4	45.36	7.40	0.16
Middle (36-50) yrs	39	78			
Old (Above 50 yrs)	9	18			
Educational attainment					
Illiterate	24	48			
Primary	26	52			
Family size					
Small (<4)	8	16	4.4	0.98	0.22
Medium (4-8)	42	84			
House type					
Thatch roofed with mud wall	37	74			
Corrugated steel roofed	13	26			
Extent of dependence on S C (%)					
Up to 25%	0	0			
25- 50%	7	14.00			
50- 75%	29	58.00			
75- 100%	14	28.00			
Social Participation					
Self help group	4	8.00			
Community based organization	4	8.00			
No participation	42	84.00			
Poverty status					
Below international poverty line	43	86.00			
Above international poverty line	7	14.00			

respondents and majority (86%) of them was in poverty trap. Findings pertaining to socio-economic profile (Table 1) of the respondents clearly demonstrate transition in youths that they are reluctant towards SC, only middle and old age members in household are involved in SC. Further, majority of the respondents belongs to average age of about 45 years and these age groups (between 35 and 65) are considered less happy compared to adolescents and elderly people as observed by Helliwell (2003).

Households' Income and Expenditure Pattern of Respondents

Several studies have confirmed that income inequality, rather than absolute income is an important predictor of happiness however, its specific role has been controversial. Yu and Wang (2017) have argued that income inequality and happiness should exhibit an inverted U-shaped relationship due to the dynamic competing process between two effects. Consequently, we may hypothesize that the income gap between the rich and poor to be a better predictor of happiness. Hence, this dimension was studied and results are presented in Table 2.

Table 2 shows the average monthly income and expenditure inrespondents' household of the selected locale. The results revealed that at the base year (2016), the average monthly income of the households was found to be about 1600 with deviation of 1244.84 in the sampled district wherein, agriculture and allied activities contributed about 68% oftotal monthly income. It isclear from Table 2 that expenditure on food items (32.31%) take away one third of respondents' household budget followed by festival (18.25%) and education (13.53%) and rest of the expenditure was on clothing, religious ceremony and repairing of house. Surprisingly, expenditure on health &travelling was found nil among the respondents. This is comprehendible from the fact that food is the basic need of every individual so the expenditure is incurred accordingly. The SD and SE value of average monthly income of upland tribal household was found to be very high, which means that there exists high variability in income distribution among the respondents. It is encouraging to know that tribals are putting greater emphasis on education now as evident from their expenditure in this head. However, highest CV (122) in expenditure on education indicate uneven pattern of the same among the tribals which implies skewed awareness among them regarding importance of education in one's life.

Table 2: Average monthly income and expenditure of respondents' households

Income	Mean ( )	SD ()	SE	CV (%)
a) Primary	1088.00 (67.61%)	906.25	153.87	83
b) Secondary	521.30 (32.39)	538.74	73.72	103
Average income	1609.30	1244.84		
Expenditure				
Food	372.20 (32.31%)	321.49	52.64	86
Non-Food				
a) Education	155.90 (13.53%)	190.23	22.05	122
b) Clothing	123.40 (10.71%)	70.09	17.45	57
c) Religious ceremony	64.90 (5.63%)	38.45	9.18	59
d) Festival	201.80 (17.52%)	144.84	28.54	72
e) Maintenance/repairing of house	43.00 (3.73%)	31.51	6.08	73
f) Health & travelling	-	-	-	

Figure in parenthesis indicates the percentage of total income/expenditure

Access to mass media and mobile phone by the respondents

Figure 1 reveals the mass media exposure and access to cosmopolite sources of information by the respondents. It is clear from the table that access to mass media and mobile phone among the respondents was very low. Only 22% respondents had access/use to print media in the remote hilly district followed by television (18%). Possession of radio by the respondents was found to be very low (14%)and access to public supported agricultural extension/ advisory services in the study area was reported by only 10% whereas same proportion of respondents usage of mobile phone. Poverty and remoteness of the upland tribes of the state may be the possible reasons to poor access to cosmopolite sources of information.

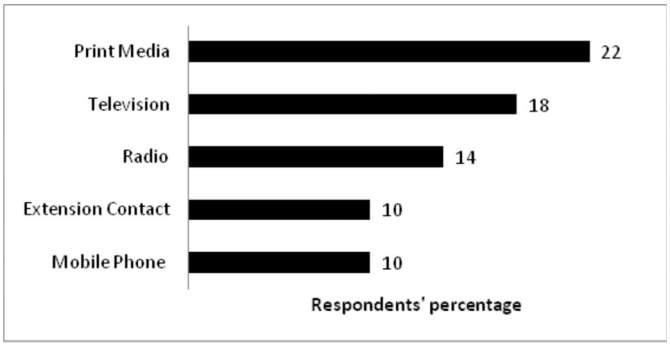

Fig. 1: Access to mass media and mobile phone by the respondents

Agricultural Diversification Preferences

Based on thorough review of relevant literature, a list of technological options, recommended by different scientific establishments for better management of shifting cultivation was prepared and placed before the respondents. Focused group discussions were also conducted with key stakeholders to validate the response of the respondents.

Table 3 reveals that small-scale food processing unit (pickle jam/jelly, Ready to Serve (RTS) beverage, squash, candy etc.) ($\bar{x}$=4.94), vegetable cultivation (=4.54) and Spice crops production (=4.46) were identified by the respondents as top three choices for agricultural diversification in shifting cultivation (SC)area and ranked I, II and III respectively. Other strategies like live fence to protect crops from wild animal, integrated farming and fruit orchard could be viable options for agricultural diversification and contribute to enhancing income in SCarea as reported by the respondents. The reasons for preferences are easily comprehensible on the fact that the given tribal settings are endowed with vast natural resources with supporting climatic and edaphic factors which are conducive for fruit orchards, spices production and vegetable cultivation in the area. In addition, the production of pineapple and jackfruit in the study area was in large quantity which need value addition for better marketing hence, respondents accorded top priority for small-scale fruit processing unit.

Table 3: Agricultural diversification preferences of respondents

Diversification preferences	Average score	Standard Deviation	Rank
Small-scale processing unit	4.94	0.24	1
Vegetables cultivation	4.54	0.50	2
Spice crops production	4.46	0.50	3
Live fence	4.20	0.53	4
Integrated farming	4.16	0.79	5
Fruits orchard	3.96	1.03	6

Barriers towards Settled Cultivation & Livelihood Diversification

Figure 2 reveals that among several bottlenecks, lack of individual ownership of land (=3.00), insufficient natural resources (=2.78) and absence of role model & risk fear (=2.74) emerged as the most

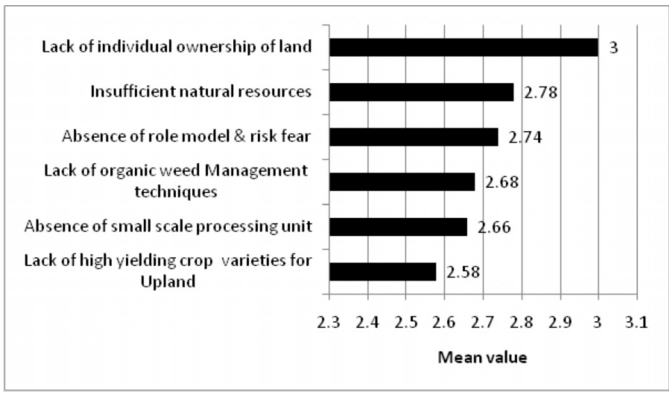

Fig. 2: Constraints faced by respondents in settled cultivation & livelihood diversification

important challenges that hinders the different options of livelihood diversification. Further, lack of organic weed management techniques (=2.68), absence of small scale food processing unit (=2.66) and lack of high yielding crop varieties well suited on SC land (=2.58)were other important impediments as expressed by the respondents towards diversification of their livelihood and income enhancement. It is worth to mention that the Backward Regions Grant Fund Programme (BRGF) in the Dhalai district launched in 2006-07, envisages a new approach to addressing persistent regional imbalances in development, however, level of people's awareness about the program was low and overall amount of grants is too small to meet the infrastructural deficits of the backward regions (Planning Commission 2014).The availability and access to markets by all farmers in general, and small and marginal farmers in particular, is an important factor in the market architecture that too still taking shape. Livelihood opportunities of SC practitioners suffer due to negative impact of agrarian policy implementation of government (Jakobsen*et al.,* 2007) and the development may be unsustainable (Alexander *et al.,* 2010).

Subjective well-being of the respondents

Assessment of well-being status of the respondents indicates that92% of them perceive their well-being asmoderate or inconsistent. They are either struggling in the present or expecting more struggle in the future. They are less likely to eat healthy food and are likely to indulge in drinking & smoking. However, only 2% reported well-being that is strong, consistent, and progressing. These respondents have positive views of their present life situation and they look for betterment of their quality of life in next five years. A meager (6%) proportion of respondents perceived well-being that is at high risk. They have inadequate access to basic amenities of life e.g., food, shelterand clothing.These respondents have given poor ratings of their presentlife situation (below 4 in a scale of 10). They are less optimistic about their well-being status improving in near future (below 4 in a scale of 10).

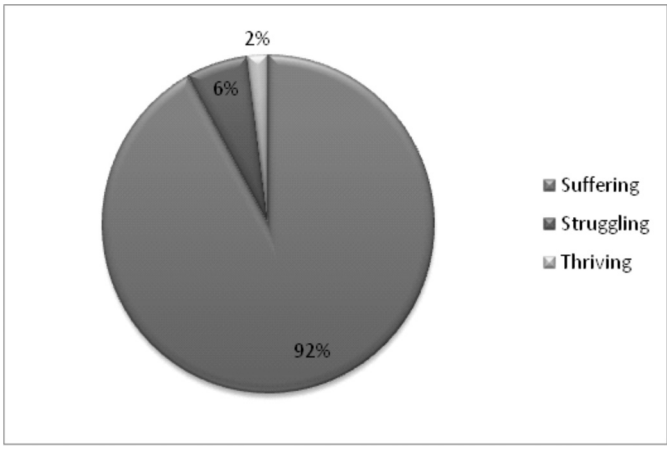

Fig. 3: Status of subjective well-being of respondents

The present study finds that subjective well-being of majority of the respondents are moderate and inconsistent as perceived by them. This in other words means that these households are experiencing difficulty in eking out livelihood from SC. The probable reasons behind this are large-scale substitution of indigenous vegetation by rubber or monoculture (cash crop) interplay of media, transition in cultivation system, poverty and social determinants that are unable to keep pace together thereby affecting well-being negatively of hill people practicing SC. Additionally, a shift from SC deserves amicable solution for the existing issues through government programs and policies on equitable basis whereas, the current efforts are concentrating on selected watersheds and opted for localities and the areas covered under such efforts are limited. Only a selected group of population is covered, which may lead to subsequent inequalities in the communities (Tiwari, 2017) and may result in lower level of happiness.

CONCLUSION

A clear picture has emanated from the findings of the investigation that socio-economic and technological changes are leveraging transition significantly and is affecting the lives of hill people practicing shifting cultivation . Consequently, majority of them are experiencing difficulties in deriving livelihood from SC and opting out other alternatives which lends credence to the fact that the perceived

desirable goal of transition for development in any society is to bring equality with happiness. Moreover, Government-led initiatives for livelihood diversifications are finding favors with the educated youth; however, this may raise concern that whether such interventions are widening the rich-poor divide. Therefore, the emerging greater degree of heterogeneity in present level of income and well-being among the members of the community warrant immediate implications to ensure inclusiveness and growth.

It is therefore, suggested to put multi-pronged strategy in place with institutional and policy reforms in development approaches which may usher in well-being among the tribals dependent on SC. Further, at the socio-nucleus level i.e., from household perspective, the distributional aspects of income, providing access to basic needs especially for the people living at the bottom of the pyramid and improving the quality of life need not to be ignored by the development administration. It is argued that enabling elements like infrastructure (transport, markets, processing) and institutions (credit, extension, information) are to be accelerated to promote non-farm vocational opportunities in Northeastern India. This would go a long way in capitalizing the transition and thereby securing the livelihood and well-being of the vulnerable communities.

Acknowledgment

This study is a part of ICAR project and first author is highly grateful to the Agricultural Extension Division of ICAR for providing financial support to conduct the study.

Paper received on : October 19, 2017
Accepted on : November 06, 2017

REFERENCES

Alexander, K. S., Millar, J. and Lipscombe N. (2010). Sustainable development in the uplands of Lao PDR. *Sustainable Development*, 18(1), 62-70.

Anonymous. (2014). List of 272 BRGF including 22 new districts, http://www. panchayat.gov.in/documents/10198/562728/Annexure%20for%202421.pdf.

Cantril, H. (1965). Pattern of human concerns.

Chandramouli, C. and General, R. (2011). Census of India 2011. *Provisional Population Totals. New Delhi: Government of India*.

Diener, E., Kahneman, D., Tov, W., and Arora, R. (2009). Income's Differential Influence on Judgments of Life versus Affective Well-Being. *Assessing Well-Being*. Oxford, UK: Springer.

Eurofound. (2013). Third European Quality of Life Survey – Quality of life in Europe: Subjective wellbeing, Publications Office of the European Union, Luxembourg, DOI: 10.2806/37878.

FSI. (2011). State of Forest Report. Dehradun: Forest Survey of India.

Gallup. (2009). World Poll Methodology. Technical Report. Washington, DC.

GoT. (2016). Government of Tripura. Dhalai District profile 2016, http://dhalai.nic.in/TourNotes/District_Profile_%20Dhalai.pdf.

Helliwell, J. F. (2003). How's life? Combining individual and national variables to explain subjective wellbeing. *Economic Modelling,* 20, 331–360.

Helne, T. and Hirvilammi, T. (2015). Wellbeing and sustainability: a relational approach. *Sustainable Development,* 23, 167–175.

Jakobsen, J., Rasmussen, K.Leisz, S.Folving, R. and Quang, N. V. (2007). The effects of land tenure policy on rural livelihoods and food sufficiency in the upland village of Que, North Central Vietnam. *Agricultural systems*, 94(2), 309-319.

NAS (National Academy of Sciences). (2014). Subjective well-being. Measuring Happiness, Suffering, and Other Dimensions of Experience, The National Academies Press, Washington DC.

NEF. (2009). National Economic Foundation. National Accounts of Well-Being, http://www.nationalaccountsofwellbeing.org.

Nettle, D. (2005). Socio-economic status and subjective well-being. *Newcastle upon Tyne: New Castle University*.

OECD (Organisation for Economic Co-operation and Development). (2013). OECD guidelines on measuring subjective well-being.

Planning Commission. (2014). *Evaluation Study of Backward Regions Grant Fund (BRGF)* (No. 223). PEO Report.

Schor, J. B. (1998). The Overspent American. New York: Basic Books.1998.

Tiwari, B. K. (2014). Policies and Alternative Options to Shifting Cultivation in Northeast India-A Review 2004-2014.

Tiwari, B. K. (2017). *Shifting Cultivation: Towards Transformation Approach*; A Draft Report, National Institute of Rural Development &Panchayati Raj, North Eastern Regional Centre, Khanapara, Guwahati.

Weaver, F., Gonçalves, J andRyser, V, A. (2015). *Socioeconomic inequalities in subjective well-being among the 50+: contributions of income and health* (No. 15011). Institutd'EconomieetEconométrie, Université de Genève.

Yu, Z. and Wang, F. (2017). Income Inequality and Happiness: An Inverted U-Shaped Curve. *Frontiers in psychology*, 8, 2052.