

Livelihood Status of Village Forest Committee (VFC) Members in Karnataka State

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ABSTRACT

Village Forest Committee (VFC) members engage in diverse and multiple activities to improve their livelihoods by maximizing their income through income generating activities, while minimizing vulnerability of risk and achieving other household objectives (improved health, nutrition and education etc. The present study was conducted in three forest circles such as Koppa, Karwar, and Kodagu during the year 2014-15 to analyse the livelihood status of VFC members. A total of 180 VFC members both male and female were interviewed using a pre-tested schedule. It was found that, 59 per cent of VFC members had just secured livelihood status. The variables such as experiences in JFPM programme ($r=0.296$), environmental awareness ($r=0.271$), land holding ($r=0.289$) and family income ($r=0.285$) had positive and significant relationship with the livelihood status at one per cent level. Whereas, family dependency ratio ($r=-0.272$) had negative and significant relationship with the livelihood status at one per cent level.

ENVIRONMENTAL Sustainability is increasingly being threatened by large scale changes to the natural environment. Human behaviour is disrupting natural ecological processes and depleting natural resources worldwide, causing potentially irreversible global environmental changes that could significantly affect human and ecosystem health. Joint Forest Planning and Management (JFPM) programme is one of the forest conservation and income generating programme with the involvement and co-operation of local people living in and around the forest area. JFPM basically includes sharing of products, responsibilities, control and decision making authority over the forest land between forest departments and local user groups. The JFPM facilitates the planning, protection, conservation and development of forest and natural resources which finally helps in mitigation of forest degradation and ill effects of climate change. Through this programme, tree coverage has been increased when compare to earlier situation. This process eventually helps to mitigate the climate change. The Karnataka Forest Department has constituted 3887 VFCs in the Karnataka state bringing nearly 3,40,000 ha. of degraded forests under JFPM. Tribals living in and around the forest area are supposed to develop, conserve and protect the forest resources but, they are destroying the forest resources. In order to arrest the destructions of the forest by the tribals, the Government of India introduced a programme called Joint Forest Management (JFM) programme. JFM order was issued during 1990 after the forest policy act was conducted during 1988 which set the stage

for participatory forest management in India. The Government of Karnataka promulgated a government order on Joint Forest Planning and Management (JFPM) programme in 1993. This was further reinforced with Japan International Cooperation Agency (JICA) funded project namely Karnataka Sustainable Forest Management and Bio-diversity Conservation (KSFMB) Project. This project was initiated during the year 2005-06. JFPM scheme is known to provide ecological, socio-cultural, and economic benefits to rural society.

Livelihood is the means in which people use to support themselves, to survive and to prosper. It is an outcome of how and why people organize to transform the environment to meet their needs through technology, labour, power, knowledge and social relations. Livelihood is also shaped by the broader economic and political systems within which they operate. A livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stress and shocks and maintain or enhance its capabilities and assets both at present and in the future, while not undermining the natural resource base. (Chambers and Conway, 1991).

However, livelihood is an outcome of how and why people organize to transform the environment to meet their needs through technology, labour, power, knowledge and social relations. Put crudely, almost half

of the world's population does not have the socio-economic and political means to realize their economic and social rights. One of the major causes of the poverty is the lack of viable livelihoods in the developing world. Livelihoods are the sum of ways in which people make a living. The idea of livelihood security embodies three fundamental attributes *viz.*, the possession of human capabilities, access to other tangible and intangible assets, and the existence of economic activities. The interaction among these attributes defines what livelihood option an individual pursue. Households combine their livelihood resources within the limits of their context and use their institutional connections to pursue a number of different livelihood options. Such options can include various types of production and income generating activities. Thus, each household can have several possible sources of entitlement, which constitute its livelihood. With this background, the present study has been under taken to know the livelihood status of VFC members in Karnataka state. Hardly any studies were conducted to know whether livelihood status of people has improved or not due to KSFMB project.

METHODOLOGY

A research study was carried out in forest area of Karnataka state during the year 2014-15. Six Village Forest Committees (VFCs) randomly were selected from Koppa, Karwar and Kodagu forest circles. Two VFCs were randomly chosen from each of selected circle. Fifteen female were selected from each VFC by applying proportionate random sampling technique. Thus, a total of 180 VFC members from six VFC were selected for the study to measure their forest management behaviour. The collected data scored and

analyzed using chi square, correlation test and, multiple regression analysis.

RESULT AND DISCUSSION

Overall Livelihood Status of VFC members in three Circles and Pooled situation : An examination of Table I indicates that, in Koppa division 60.0 per cent of VFC members had just secured level of livelihood status, followed by better (23.0%) and poor level of livelihood status (17.0%). Similarly in Kodagu circle, 60.0 per cent of VFC members had just secured level of livelihood status, followed by better (30.0%) and poor level of livelihood status (10.0%). Whereas, in Karwar circle, 57.0 per cent of farmers had just secured level of livelihood status, followed poor (23.00%) and better (20.00%) level of livelihood status. In case of pooled situation 59.0 per cent of VFC members had secured level of livelihood status, followed by 24.0 per cent better and 17.0 per cent poor level of livelihood status. The results revealed that there is difference in livelihood status among Koppa, Karwar and Kodagu VFC members. This might be due to the difference in their income level, sources of income, assets, different activities, capabilities and coping strategies. The findings of the study are supported by Richard Giliba (2010) and Jones (2013).

Variation in livelihood status among VFC members in different circles :The chi-square test was applied to test the overall livelihood status of VFC members in different forest divisions and pooled situation (Table II). The test was turned out to be significant at one per cent level indicating a significant variation in the overall livelihood status of VFC

TABLE I
Overall livelihood status of VFC members in three circles and pooled situation

(n=180)

Livelihood status	Koppa (n1=60)		Karwar (n2=60)		Kodagu (n3=60)		Pooled situation (n=180)	
	No.	%	No.	%	No.	%	No.	%
Poor livelihood status	10	17	14	23	6	10	30	17
Just secured livelihood status	36	60	34	57	36	60	106	59
Better livelihood status	14	23	12	20	18	30	44	24
Total	60	100	60	100	60	100	180	100

TABLE II
Variation in livelihood status among VFC members in different circles

Livelihood status	Koppa (n ₁ =60)		Karwar (n ₁ =60)		Kodagu (n ₁ =60)		Pooled situation (n=180)		x ²
	No.	%	No.	%	No.	%	No.	%	
Poor (< 160.17 score)	10	17	14	23	6	10	30	17	
Just secured (160.17 to 166.62 score)	36	60	34	57	36	60	106	59	64.55**
Better (> 166.62 score)	14	23	12	20	18	30	44	24	
Total	60	100	60	100	60	100	180	100	

** Significant at 1 per cent level

members in different forest circles *viz.*, Koppa, Karwar, Kodagu and pooled situation. This could be due to their diversified livelihood options, educational level of the family members, size of land holdings and livestock possession. From the above discussion it could be concluded that there is a difference in the levels of livelihood status in three circles *viz.*, Koppa, Karwar, Kodagu and pooled situation of Karnataka state.

Relationship between independent variables and livelihood status of VFC members in pooled situation : The relationship between independent variables with livelihood status of VFC members in pooled situation are furnished in the Table III. The variables such as experiences in JFPM programme (r=0.296), environmental awareness (r=0.271), land holding (r=0.289) and family income (r=0.285) had positive and significant relationship with livelihood status at one per cent level. Whereas, family dependency ratio (r= -0.272) had negative and significant relationship with livelihood security at one per cent level. The other variables such as, family size (r=0.169), training need (r=0.168), participation in JFPM activities (r=0.137), extension contact (r=0.135), economic motivation (0.139) and decision making ability (r=0.151) had positive and only risk orientation (r=-0.136) had negative and significant relationship with livelihood status at five per cent level. While education (r=0.020), family type (r=0.049), marital status (r=0.054), farming experience (r=0.044), family encouragement (r=0.061), social participation (r=0.071), material possession (r=0.097), mass media use (r=0.013) and aspiration (r=0.049) had positive

TABLE III
Relationship between Independent variables and livelihood status of VFC members in pooled situation
(n=180)

Sl. No.	Independent variables	Correlation coefficient (r)
X ₁	Age	-0.091 NS
X ₂	Education	0.020 NS
X ₃	Family size	0.169 *
X ₄	Family type	0.049 NS
X ₅	Family dependency ratio	-0.272 **
X ₆	Experience in JFPM programme	0.296 **
X ₇	Marital status	0.054 NS
X ₈	Training need	0.168 *
X ₉	Farming experience	0.044 NS
X ₁₀	Environmental awareness	0.271 **
X ₁₁	Family encouragement	0.061 NS
X ₁₂	Land Holding	0.289 **
X ₁₃	Participation in JFPM activities	0.137 *
X ₁₄	Extension contact	0.135 *
X ₁₅	Social participation	0.071 NS
X ₁₆	Family income	0.285 **
X ₁₇	Material possession	0.097 NS
X ₁₈	Mass media use	0.013 NS
X ₁₉	Risk orientation	-0.136 *
X ₂₀	Aspiration	0.049 NS
X ₂₁	Economic motivation	0.193 *
X ₂₂	Decision making ability	0.151 *

** Significant at 1 per cent level.

* Significant at 5 per cent level. NS: Non-Significant

and non-significant relationship, while age ($r=-0.091$) had negative and non-significant relationship with the livelihood status of VFC members.

As family size increases number of earning members in the family increases thus positive and significant relationship between family size and livelihood security was observed in all the three circles namely Koppa, Karwar Kodagu and also in pooled situation. The similar finding was reported in all the three circle Koppa, Karwar, Kodagu and also in pooled situation. Dependency ratio had negative and significant relationship with the livelihood status of VFC members. The likely reason might be that as dependency ratio increases the livelihood security which effect the livelihood status, decreases due to dependency of non-earning members on earning members. VFC members are practicing the forest conservation, protection, and managing and development practices since long time due to joint forest planning and management programme and they learned from the challenges which were faced and found solution how to solve the problem and achieves the challenges. The exposure of respondents to trainings increases their confidence level and skills to do varied works as a result earnings also increases hence, training need had positive and significant relationship with livelihood status of VFC members in Koppa, Karwar, Kodagu circle and also in pooled situations. Further, the possible reason for this kind of result might be that, majority of VFC members were aware of the various parameters of environmental issues such as rainfall, temperature etc., and ill-effects of climate change and degradation of natural resources, hence, they had better knowledge about the climate change. As JFPM activities comprised planning, protection, conservation and development of forest and forest areas, VFC members had knowledge about the environmental issues. Land holding of VFC members had positive and significant relationship with livelihood status in all the three circles and also in pooled situations. The possible reason might be that landholding is the major asset which gives continued income to the family thereby secured livelihood. It implies that VFC members had always involved in all the JFPM activities conducted by VFC in order to plan, conserve, protect and development of forest

areas and also they were enjoying the activities, which improves their livelihood and forest lands. The results indicate that there is significant and positive relationship between extension contact and livelihood status of VFC members. The significant relationship between livelihood status and extension contact is mainly, due to out reach activities and regular contact with forest department personnel has influenced the livelihood status in large measure. Frequent contacts with change agents provide necessary, timely guidance and reinforcement to initiate action on the part of VFC members. Extension contact further helps VFC members to select new crops, technologies and various enterprises to fetch more profits and sustenance. The results indicate that there is significant and positive relationship between family income and livelihood status of VFC members. Starting or expansion of forestry, agriculture and allied activities depends upon the economic condition of VFC members. Sustained income earned by the family members who are eligible for work and busy in field of forestry, agriculture and allied activities has helped the families to spend their income for their livelihood and to have better livelihood status. In all the three forests circles *viz.*, Koppa, Karwar and Kodagu and also pooled situation, risk orientation had negative and significant relationship with livelihood status of VFC members. It could be due to the fact that risk orientation of the respondents increases the security for their living standards. The findings of the study are supported by Sharma (2004), Lavanya (2010) and Raksha *et al.* (2012).

The economic motivation had a positive and significant relationship with livelihood status of VFC members in three circles and also in pooled situations. The likely causes might be that as economic motivation increases, respondents attaches greater importance to profit maximization thereby secured livelihood can be achieved. The decision making had a positive and significant relationship with livelihood status of VFC members in three circles and also in pooled situations. The results might be due to the fact that the decision making with respect to financial matters and outside home activities rests with their family members and it makes the life secured. The present study finding is in line with the findings of Chandrakala (1999); Veeranna (2004) and

TABLE IV
Extent of contribution of independent variables to livelihood of VFC members in pooled situation

Independent variables	Regression co-efficient (b)	Standard error (SEb)	t- value	n=180
Age	-0.0444	0.0823	0.54	NS
Education	0.0309	0.0778	0.40	NS
Family size	0.2449	0.0784	3.14	**
Family type	0.0382	0.0806	0.47	NS
Family dependency ratio	-0.1851	0.0654	2.83	**
Experience in JFPM programme	-0.1809	0.0986	2.43	**
Marital status	0.0626	0.1507	0.41	NS
Training need	0.2386	0.0999	2.49	*
Farming experience	0.1685	0.0916	1.84	NS
Environmental awareness	0.0338	0.1377	0.25	NS
Family encouragement	0.3334	0.1026	3.25	**
Land Holding	0.0533	0.1153	0.36	NS
Participation in JFPM activities	0.2265	0.0939	2.41	*
Extension contact	0.2820	0.0934	2.35	*
Social participation	0.6360	0.1339	4.75	**
Family income	0.2422	0.0794	3.05	**
Material possession	0.0542	0.1141	0.21	NS
Mass media use	0.0537	0.1115	0.25	NS
Risk orientation	0.0665	0.0838	0.18	NS
Aspiration	0.1376	0.0769	1.78	NS
Economic motivation	0.2893	0.0975	2.36	*
Decision making ability	0.2365	0.0999	2.51	*

*= Significant at 5 per cent level.

**=Significant at 1 per cent level.

NS= Non-Significant. $R^2= 0.8140$. $F = 12.56^{**}$.

Singh (2004), The findings of the study are supported by Lakshmi Narayani (2009), Ereneus Marbaniang (2010), Raksha *et al.* (2012) and Rokonuzzaman (2013).

A critical look at the Table IV inferred the contribution of independent variables of VFC members to their dependent variable in pooled situation. The results concluded that independent variables such as family size, family dependency ratio, experience in JFPM programme, training need, family encouragement, participation in JFPM activities, extension contact, social participation, family income, economic motivation, and decision making ability had significantly contributed to the livelihood status of VFC members in pooled situation.

The R^2 value pointed out that all the 22 independent variables had contributed to the tune of 81.40 per cent of variation in livelihood status.

Majority of the VFC members in Karnataka state were found to have medium level of livelihood status. Hence, there is need to improve the livelihood status of VFC members in Karnataka state by providing required and adequate facilities *viz.*, irrigation, agricultural inputs, technical guidance, training and market for the produce at village level to carry out farming more effectively. Thus, the VFC should extend loan to all the VFC members in order to sustain their lives under adverse climatic situation by promoting other Income Generation Activities. Providing the specific strategies for specific forest area by the help of VFC members, increasing their relationship with local NGOs and other related agencies and VFC members should encourage and motivate the local people to participate in forest conservation, protection, management and development activities.

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