



Short Communication

Rural vulnerability context and livelihood challenges in serchhip district Mizoram, India

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Abstract

Assessing vulnerability context is one of the important tasks in any livelihood study which is also included in the Sustainable Livelihood Framework. The present study analysed the vulnerability context of two selected villages of Serchhip district Mizoram by using participatory method of seasonality diagram. Services and opportunities map was also used to assess the context. The livelihood challenges and coping strategies was also explored using semi structured interview schedule. The findings of seasonality diagram demonstrated that rainfall accompanied by landslides and transportation problem is the main factors for rural vulnerability. Regarding the livelihood challenges, the main challenges described were irregularity of income, low price of crops, poor health, lack of livelihood options, inadequate human labour, poor quality of agricultural land and geographical location of village; long distance of agricultural land, educational expenditure for children, consumption of crops by animals and poor conditions of road respectively. The coping strategies stated were hard working, praying, economising, borrowing, withdraw money from savings, assistance from relatives, hiring labour and plan for new livelihood activities respectively. These challenges and coping strategies were all related to agriculture where it needs special attention and consideration in promoting rural livelihood. The study offered recommendations like promoting off farm activities, credit linkages, better infrastructures, health care services and environmental protection.

Keywords: Vulnerability context, seasonality, livelihood challenges, coping strategies, sustainable livelihood

Introduction

Assessing vulnerability context is the first task in livelihood analysis which is one of the components of Sustainable Livelihood Framework. Vulnerability can be defined as an exposure and defencelessness to shocks, stress and risks and the inability to cope with them. It is not synonymous with poverty. Vulnerability has two sides that include internal and external sides. An internal side refers to the inability to cope without damaging loss and the external side refers to shocks, stress and risks of which people are subjected to. Loss occurred in different forms that include physical weakness, financial instability, social insecurity and psychological weakness¹. It may also be defined as “a human condition or process resulting from physical, social, economic and environmental factors, which determine the likelihood and scale of damage from the impact of a given hazard”².

There can be different types of vulnerability context and can affects people in different ways. The types of vulnerability vary across regions which are determined by different factors. Due to this reasons, shocks caused by natural phenomenon will tend to have a worse effect on agriculture activities while fluctuation in commodity prices will have effect on the producers and exporters.

So assessing and identifying the nature and kinds of vulnerability is always a concern in sustainable livelihood studies. The analysis of livelihood tries to focus on understanding the trends and shocks of seasonality rather than attempting to cover the whole aspects of the vulnerability context. The identification of the effects of these factors and the minimisation of the negative effects is also necessary³. The vulnerability context also shaped different livelihood challenges which are linked with each other. The livelihood challenges are determined by the geographical location, size of family, health conditions, existing institutions, etc.

Rural people try to mitigate these risks and adopt different coping strategies in the challenges they faced. When people faced these livelihood challenges, they are likely to diversify their livelihood for their survival and secure from risks. The level of diversification is also largely influenced by their vulnerability context in which vulnerabilities can become an obstacle or hinders the level of diversification. Besides livelihood diversification, rural households also adopt different coping strategies when they faced these challenges. There is a need to develop strong coping strategies and strengthen the existing institutions and resources.

Overview of Literature: There are copious literatures on vulnerability context and attracted the attention of different researchers who are concerned in livelihood promotion. According to Kimani & Bhardwaj, seasonality is a major threat to economic growth and its sustainability which also results in increased poverty. This is based on the study conducted in semi-arid regions of sub Saharan Africa. The study identified food production, water resources, range lands, biodiversity, and health sector as the main areas of vulnerability. The paper states that climate change will increase temperature and brings severe drought conditions and stress. Further, the livelihood will be negatively affected⁴. Holmes and Jones assessed the vulnerability of poor households to socio- economic stress and shocks that includes vulnerability due to food insecurity, lack of resources, productivity loss, health challenges, gender inequality, social events, lack of information, possession of assets, and labour market discrimination. The study found out that rural households in India have limited investment in agriculture and access to resources⁵. An attempt has been made to examine the vulnerability context to different types of shocks based on the study in Ethiopia. The study revealed that shocks due to drought and illness are the most dominant types of shocks in the study area⁶.

Francis conducted a case study in the Northwest region of Southern Africa in which he studied about the dynamics of livelihoods in rural areas by examining how and why it changed in a certain periods. A focus was made on the conditions and degree of the changing process as well as the resource which are important in the process. The study identified the major risks which people face in pursuing their livelihoods and their responses to such risks⁷. Slater also examined the change of livelihood pattern among black South African peoples under apartheid transition to democracy. The study assessed the process of differentiation and how the people respond to the changing livelihood opportunities and related risks and insecurity⁸. Kaushik & Sharma conducted a study in Rajasthan and explored the adaptations of rural livelihoods to climate change and its vulnerability. They stated that the study area is expected to become adverse with an increase in temperature and intensity of rainfall events. An adaptations and perceptions of people to climate change were also studied in the hilly region of Himachal Pradesh. The study found out that nearly ninety percent of the respondents perceived rise in temperature and decreasing in the amount of rainfall. The paper also outlined different barriers to adaptation⁹. Karim, Muhammad, Anne & Narayanarao studied the challenges of change in climate and the people adaptations among small holder households in Rangpur district of Northern Bangladesh¹⁰. Rashid, Langworthy & Aradhyula also assessed the coping strategies adopted by households to face risks associated with their livelihood security in Bangladesh¹¹.

The overview of literature on rural livelihood vulnerability and coping strategies shows that it has attracted the attention of different researchers and helps us in understanding the concept

and issues. However, few research gaps could be identified. As there are regional and climate differences, the literature is highly inadequate in India especially in North East region. This is even less in Mizoram. There is a need to study the livelihood vulnerability, challenges and coping strategies adopted in Mizoram. There is also a need to combine qualitative and quantitative approaches in this domain of study. The study tries to fill these gaps.

Statement of the Problem: The present study attempts to assess the vulnerability context of rural livelihood in Serchhip district, Mizoram. It will also attempt to explore the challenges faced by rural households in pursuing their livelihood. The coping strategies adopted to overcome these challenges were also assessed. The study will be useful for planners, policy makers and voluntary organizations at multilevel who are concerned with issues in rural vulnerability and livelihood promotion. It will offer suggestions for planning and policy making and will develop better understanding and direction for different developmental workers.

Objectives: i. To understand the rural vulnerability context in Mizoram. ii. To explore into the livelihood challenges of rural households. iii. To understand the coping strategies adopted by rural households in their livelihood.

Study area: The setting of the present study deals with the profiles of the state and the selected district with the villages for the study.

The State of Mizoram: Mizoram is located in the North-eastern parts of India which lies between 92°15' to 93°29' East longitude and 21°58' to 24°35' North latitude. The people living in the state are called 'Mizos' and belong to Mongoloid stock who speaks the languages of Tibeto- Burmese family. It was traced that the original inhabitants reached the land during 1600 A.D to 1700 A.D from China. According to the Statistical Handbook of Mizoram 2014, the state has a total population of 10,97,206 (2011 census). The geographical area of the state is 21,081 Sq.km. The sex ratio is 976 with a total density of population of 52 per Sq.km. Across different eight districts; urban population consists of 571771 while rural population consists of 525435. The growth rate of population in the decade is 23.48% (2001-11) while it was 29.18 percent in the last decade. The state capital is Aizawl. However, the state has a moderate climate with an influence of south-west monsoon enriched by numerous natural beauties as well as with rich flora and fauna¹².

Serchhip District (District headquarter of the sample villages): Among the eight districts in the state, Serchhip district became one of the districts created on 15th September, 1998. The district is located on the top of the hill which lies in the central part of Mizoram. It is 112km away from the State Capital, Aizawl, with an average elevation of 888 meters (2913 feet) and lies between two important rivers known as Mat and Tuikum.

The annual temperatures range from a high degree of 34°C to a low degree of 10°C. According to 2011 Census, the population consists of 64,967 with average sex ratio of 977 which is a little lesser than the state of 976. Population growth rate is 20.56 in the decades and the density of population is 46 per Sq.km. Urban population consists of 32,049 while rural population consists of 32,918. The total area of the district is 1421.6Sq.km. It is an important source of agricultural production in the state and plays an important part in Mizo history with location of different places.

Khuntung Village: Khuntung is one of the villages that lie in Thingsulthliah RD block of Serchhip district area. It is located 48 kilometers away from its district headquarter, Serchhip, and 64 kilometers from the state capital, Aizawl. According to Statistical Handbook of Mizoram 2014, there are 253 households with a total population of 1163 that consists of 571 males and 592 females (2011-12 census). The total average sex ratio is 1037 which is much higher than the state of 976. The literacy rate of the village is 98.68 percent which is higher than the state percentage of 91.33%. There are 42 poor (BPL) families and 30 very poor (AAY) families with the remaining of 181 non-poor (APL) families. Under the provision of the Constitution of India, the village is administered by the Village Council who is elected by the people as their representatives. There are seven denominations and four community based organization viz., YMA, MUP, MHIP, and MZP operating in the village. Majority of the people engage in cultivation as their primary source of income. The National Highway NH 54 runs through the village which plays a vital role in enhancing the village's economy by selling their agricultural products to the people who passes by.

Hualtu Village: Hualtu is a medium-sized village and is located in Thingsulthliah R.D block of Serchhip district area. There are 203 households with a distance of 41 kilometers away from its district headquarter and 100 kilometers from the state capital, Aizawl. The total population is 1064 consisting of 557 males and 507 females (2011-12 census). The sex ratio is 910 which is much less than the state of 976. It has literacy rate of 95.16% which is higher than the state literacy rate of 91.33%. There are 30 poor (BPL) families and 24 very poor (AAY) families with the remaining of 149 non poor (APL) families. Under the provision of the Constitution of India, the village is administered by the Village Council who is elected by the people as their representatives in the form of local self government. In 1972, the first settlers arrived in the village and established the first church. Community based organization functioning in the village includes YMA, MHIP, MZP, and MUP and there are 8 denominations functioning in the village.

Methodology

The study was cross sectional in nature and descriptive in design. The study used mixed method of qualitative and quantitative approaches. The quantitative data were collected

through semi-structured household interview schedule. In addition, qualitative data were also collected through participatory methods. Unit of the study was households and all the rural households in Serchhip district, Mizoram constitute the population. A multi stage sampling procedure was followed to select district, block, villages and households. Under the district, two villages were selected which lies along the National Highway (Khuntung village) and away from the National Highway (Hualtu village). In both the selected villages, the list of households belonging to very poor (AAY), poor (BPL) and non-poor (APL) categories were obtained from the Village Council Presidents. In each of the category, systematic random sampling was used proportionately to select the household. The overall sample size of the study was 131 households which covers 1 house in every 3 houses in Hualtu village and 1 house in every 5 houses in Khuntung village. Before conducting survey, a pilot study was conducted in the selected villages. The final survey was conducted during the month of August, 2015.

Results and discussion

Vulnerability context of the Study Area: Seasonality diagram: The vulnerability context of the sample villages was assessed using participatory method of seasonality diagram. In this study, it covers the effects of seasonality regarding climate change, food security, workload, health status, availability of resources and other issues. It was taken from the month of January to December (annual) where the characteristics were divided into four levels viz., (i) "0" represents null/not applicable, (ii) "1" represents 'low', (iii) "2" represents 'medium' and (iv) "3" represents 'high'.

In Khuntung village, the study reveals that rainfall gradually increases by the month of June where it reaches its maximum point in the month of July and August and declines by the month of September and shows no rainfall from November to April. The dry season reaches its peak from December till February where it declines in March and shows no drought from May to September. It gradually increases again by the month of October. The village experiences hot season during March to June and its maximum temperature occur in the month of May. With regard to shocks, landslides occur during rainy season from the month of June to September. The village does not experience flood throughout the entire year as it lies in the hilly area. The two characteristics viz., agriculture and work load show a similar pattern which reaches its maximum from the month of February till May and declines after the following month and rise again in the month of September. This shows a similar pattern as majority of the households depend on agriculture for their survival. Household expenditure and income also show a significant association which rise up from the month of January till March as well as during November and December. This was determined by the period of income from their production and the expenditure of Christmas Eve as well as New Year education fees.

Shortage of water starts from January and then reaches its adverse condition by the month of February till April and rapidly falls in the subsequent month where it occurs again during winter season. Availability of food reaches its medium level of adequacy from October till April and experiences food scarcity from May to September. Regarding public distribution system, it shows that supply was adequate from the month of January till April and falls gradually from May and then increases again by the month of October where it reaches the adequacy level again in November. The PDS was largely affected by the pattern of rainfall and landslides. With regard to health condition, people are vulnerable during February to April as well as during rainy season. The village experiences transportation problems during the month of January to March and during rainy season. With regard to animal husbandry, it was recommended during January where it gradually declines and then increases again by the coming month of September till the end of the year. Except during the month of June to August, there is no enough labour available in the village.

The overall findings demonstrate that seasonality has a significant impact in rural vulnerability. Low rainfall was accompanied by drought and landslides which increases their vulnerability. The supply of public distribution system and food security was also largely determined by the season. Household income and expenditure also have an association which inferred that there was no proper savings by the household in the village. Lastly, the supply of PDS and level of food availability also indicates insecurity of food and household needs in the village.

In Hualtu village, the occurrence of rainfall gradually started from the month of May and reaches its peak in the month of July and August and decreases subsequently in the other months. Dry season reaches its maximum in the month of January and decreases gradually after it and then occurs again by the end of the year. The village experiences hot season starting by the month of March and reaches its maximum in the month of May and shows no sign from July to February. Regarding shocks, landslides occur during rainy season and the village does not experience flood since flat lands are negligible within the village area. The three characteristics viz., agriculture workload, others work load and animal husbandry revealed a similar pattern which reaches its maximum level in the month of February and again during October and November. The characteristics of household expenditure and income also show a similar pattern throughout the year. The prevalence of diseases could be observed from the first month of the year which gradually decreases after the following month and then rises again during the rainy season. As the village has a number of spring wells, scarcity of water could not be seen throughout the year. Regarding transportation, the village faces problems throughout the year which reaches its maximum during rainy season. The availability of labour is not sufficient in the village. It shows an increase during May to July that was in a medium level of availability. The supply of PDS and food availability also show a similar pattern in the village.

As Hualtu lies on the top of the hill which is accessible only by jeep road, there were many challenges and vulnerabilities observed as compared to Khumtung village which lies along the national highway. The main vulnerability was transportation problem accompanied by rainfall and landslides. Further, there were also problems of food supply and public distribution due to this. Health problem also reaches its peak and medium level in most of the months which increases the vulnerability of the village.

From both the villages, the vulnerability context show that season has a great influence in their vulnerabilities. The main vulnerability context includes rainfall and its accompanied problems like landslides, transportation and supply of materials and goods. The communication by means of road was an important issue which brings insecurity and other challenges in the villages. The spread of epidemic diseases and other health problems was also observed both in the sample villages. Lastly financial insecurity was also identified in the villages. Although most of the indicators show a similar pattern between the villages, it can be concluded that Hualtu village was more vulnerable than Khumtung village looking into the levels of vulnerabilities in the different indicators.

Services and Opportunities Map: Services and Opportunities Map is one of the tools in Participatory Rural Appraisal (PRA). It shows the nearest resources available outside the village in kilometres. To have a better understanding of the context, the study employed this tool to assess the vulnerability context of the sample villages.

The services and opportunities map of Khumtung village shows that the state capital, Aizawl is 64km away from the village. The district capital Serchhip is 48 away from the village. Both these places are very important for the village as most of their agricultural production and other goods are transported in these areas for market consumption. The police outpost, Higher Secondary School and Hospital are located 4 km away from the village in Tlungvel town. The approximate distance of agricultural land is 8km away from the village in which they used mainly vehicles for transportation. The National Highway NH 54 runs through the village which plays a vital role in the village's economy in which some of the agricultural productions are sell to the travellers.

In Hualtu village, the state capital Aizawl is 100 km away and the district capital Serchhip is 41km away. Chhingchhip town is the nearest town which is an important resource center for the village as it is the location of the nearest police outpost, Higher Secondary School, Hospital and Bank. Chhingchhip is also a place from where Hualtu road diverges from the National Highway 54. Most of the roads are earthen roads and is impassable during rainy season. The approximate distance of agricultural land is 3km away from the village.

The services and opportunities of the sample villages show that most of the important resources are outside the villages. This brings many problems for the villages especially during rainy season and occurrence of landslides. The import and export of goods, human transportation and medical emergency can become a serious challenge for these villages especially for Hualtu village.

Livelihood Challenges and Problems: Livelihood challenges are the obstacles and constraints that people face in pursuing their livelihood activities and which hinder the growth of socio-economic conditions. In the present study, the challenges faced by rural households with regard to their livelihood activities were identified. On the whole, 74 (56%) households stated that they faced livelihood challenges. The remaining were mainly households who depend on government jobs and households who were secure in their livelihood. The study found that 58 (44%) households describe irregularity of income as main challenges in their livelihood. This was followed by the challenge of low price in crops as majority of them depend on agriculture which was described by 51 (39%) households.

The other challenges described by these households were poor health conditions and lack of livelihood options by 31 (24%) respondents. The remaining challenges described includes inadequate human labour (15%), infertile land (12%), geographical location of village (12%), long distance of agricultural land (10%), educational expenditure for children (9%), consumption of crops by animals (8%), and poor conditions of road (5%).

Coping strategies refers to the behavioural and psychological responses that are used by people to minimise the stress and challenges. The study assessed the coping strategies adopted by rural households to face the livelihood challenges. Out of the 131 households, there were 72 respondents (55%) who stated their coping strategies with regard to their livelihood challenges. A similar pattern was followed between the two villages of the coping strategies adopted except in working hard and praying. Overall, it has been found that half (50%) work hard to cope with their livelihood challenges. As Christianity is followed by majority of the population in the state, these households described praying as one of the coping strategies adopted which was stated by 62(47%) households. As people who faced livelihood challenges are likely to be in low economic status, economising is an important coping strategy adopted of which 57 (44%) described it. This was followed by borrowing money from friends and relatives (29%), withdraw from savings and assistance from relatives/ others (15%). Lastly, extra labour and plan for new livelihood activities (11%) was described.

Conclusion

Rural households in Mizoram are predominantly engage in agriculture in which their livelihood is also largely determined by it. The state government and non-governmental organizations

are also promoting different livelihood strategies and taking measures to reduce this vulnerability. There is still a need to develop a better understanding of the vulnerability context and the livelihood challenges as majority of the rural households still lives in poverty and its related problems.

In the study, different types of vulnerability and insecurity were observed in the sample villages. Seasonality has become an important factor to determine the types of vulnerabilities. It is also largely affected by the geographical location of the state which lies in the hilly area and rain fed area. The ability to reduce these vulnerabilities from the villagers is very limited which needs immediate attentions from the government and other organizations. This can be mainly in the form of building better infrastructures and improving public services. The challenges and coping strategies adopted were all related to agriculture as majority of them depend on agriculture for their survival. With regard to the coping strategies, there were no interventions from external organization in which they work out different strategies by themselves to cope with the challenges.

Suggestions: The following suggestions are put forward based on the findings of the study: i. Promoting off-farm activities: It was observed that most of the households depend entirely on farm based activities for their survival. As the livelihood challenges are much related to these farm activities, there is a need to promote off farm activities to diversify their livelihood and ensure security. This will also automatically reduce their vulnerability context. ii. Better infrastructural facilities: Infrastructural facilities were highly inadequate in terms of road, market, electrification, storage facilities, and water supply which hold back the development of their livelihood activities and increase their vulnerability. Therefore, infrastructural facilities must be improved to mitigate the problems and reduce the vulnerabilities. Road construction with proper drainage system is a must in this domain. iii. Promoting credit linkage: The study inferred that irregularity of income was the major challenge faced by rural households and most households have no savings at all. There is a need to revamp the financial system. This could be done by choosing appropriate micro-credit provision which would provide loans and encourage household savings. There is also a need to form organisations that would ensure its sustainability and inclusiveness with proper monitoring and evaluation mechanism. iv. Better health care services: Most of the household members faced health problems which have linkages with their working hours and performance. There is a need to provide better and accessible health care services in the village to strengthen the livelihood conditions and improve the standard of living. v. Promoting environment protection: As the vulnerability context was largely determined by the season, there is a need to protect our environment to prevent the adverse effects. Landslides, rainfall and drought that were discussed are all related to environment protection. People participation must be promoted to reduce environmental footprints and increase environmental handprints.

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