Income Diversification Strategies Framework for Livelihood Enhancement of the Farmers in Northern India

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Abstract—*Government of India has been stressing to double the farmers income by 2022. Niti Ayog also classified the backward district as aspirational and non aspirational. The income of the farmers comprises farm, non-farm and off-farm which is a key source of sustainable livelihood. This paper highlights the major work done covering national and international issues on livelihood aspects. The review identify the need, existing research gap and constraints farmers face in diversification of livelihood. The sustainable livelihood framework model of DFID framework is proposed to address above research gap, researchable issues were identified and the methodology also suggested for the study. The innovativeness and relevance in the proposed research for society was also envisaged.*

Keywords*: Aspirational districts, sustainable livelihood, DFID framework.*

The major focus of the Government of India is to double the farmers income. The livelihood of farmers' household income may come from variety of sources *viz.,* farm, non-farm and off-farm. Agricultural diversification is an important mechanism for economic growth. The research proposes to study the farmers' extent of income diversification in the selected aspirational districts identified by Niti Ayog. This will enable to formulate suitable crop diversification and income diversification strategy that may be disseminated in order to improve farmers' livelihood. Hence the major objectives are to assess the extent of income diversification among the farmers, to analyse the socio-psychological factors influencing income diversification among the farmers, to analyse the relationship between income diversification and household well being, to document successful income diversification by the farmers and to analyse the constraints in income diversification.

The agro-climatic condition in Northern plain zone of India is suitable for growing variety of crops. However, farmers are growing majorly subsistence crops like wheat, paddy and sugarcane. The subsistence based cropping system has to be changed to diversified system including post-harvest and industry based agricultural system. A diversified portfolio not only protects farmers from weather unpredictability and price risk but also enhances income and household well-being. Thus diversification is the strategy to overcome the stresses and shocks. The ICAR-IARI is having basket of technologies to address the diversification by adopting high yielding crop and horticultural varieties, natural resource management technology, plant protection and post-harvest technology products and other technologies. With this backdrop, the study is proposed to develop income diversification strategy module for the aspirational districts taking into account the basket of technology available at the research end.

Major existing research works reviewed

International :

Livelihood comprises the assets, activities, and the capabilities required for a means of living (Chambers and Conway, 1991, DFID, 2000). More specifically, livelihoods consist of a range of on-farm and off-farm activities that together provide a variety of procurement strategies for food and cash (Frakenberger *et al*., 2002). The sustainable livelihood framework developed by DFID covers a range of issues like the assets people depend upon, the strategies they develop to make a living, the context within which a livelihood is developed and those factors that make a livelihood more or less vulnerable to stresses and shocks (UNDP, 2010). Barrett *et al.* (2001) reported that assets, activities and income are complementary aspects in the study of diversification behaviour. Further, the study on diversification in rural livelihoods is the subject of conceptual and policy based research because income from farming has come under pressure due to population explosion (Khatun and Roy, 2012). Barrett *et al*. (2001) gave a distinction between farm, non -farm and off-farm income. The term 'wellbeing' refers to two concepts involving the presence of

'positive wellbeing' and the absence of 'negative wellbeing' construed as, respectively, overall satisfaction with one's own life and general psychological distress (Peel *et al*., 2016). General psychological distress was assessed by the author using the Kessler 10-Item measure of General Psychological Distress ('K10') (Kessler *et al*., 2002).

National :

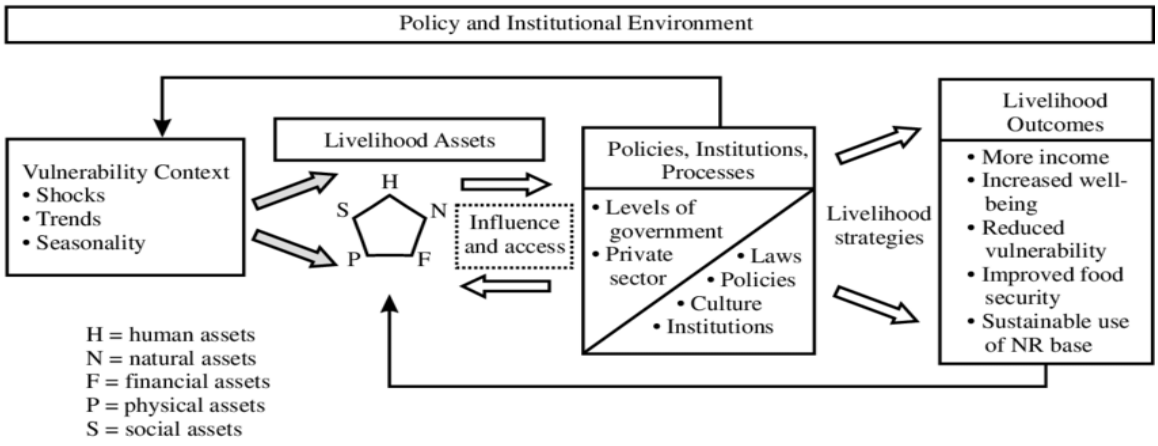
Saha and Ram Bahal (2010) in his study on the livelihood diversification of farmers of west Bengal states that the diversification index in the study area was 0.46. The study found that farmers from Darjeeling district were more diversified (52%) compared to Uttar Dinajpur district (39%). Punitha *et al.* (2018) analysed the constraint in livelihood diversification of shifting cultivation farmers. Infrastructural, resource, social and economic constraints were looked in these studies. Natural environment surrounding the people provides several goods, services and amentites and other environmental sources that form the livelihood of tribes (Kumar *et al*., 2016). Arya *et al*., (2012) studied on income diversification in shiwalik region at Haryana through Herfindhal index who reported income diversification was maximum and does not exhibit much difference between the farms. Torane *et al.* (2011) revealed diversification index of the farming systems ranged from 0.12 to 0.90 and the maximum diversification was found in paddy + irrigated plantations +flower farming systems. Khatun and Roy (2012) stated that age had a significant and positive influence on farmers livelihood diversification options at 5 per cent level. Vadivia *et al.* (1996) revealed that the households with more liquid assets like small livestocks and cattles were naturally endowed to survive shocks and were less likely to diversify their income sources.

Identification of Research gap:

In India, livelihood and their diversification studies were taken up in the west Bengal, tribal belts based on comparing watershed and non-watershed development project area. The diversification patterns of the household in the aspirational and non-aspirational districts needs to be studied in detail. The relationship between livelihood diversification and the household well-being also needs to studied through developing an household well-being index for farming households. Although adequate literature on farm innovations, Indigenous technical knowledge is available but a model of successful livelihood diversification needs to be documented for scaling up. Hence there is a need to document the successful role model diversified farmers in the village. The livelihood diversification strategy framework of the aspirational districts will be developed based on this study.

Framework and methods proposed for research:

The sustainable livelihood framework model of DFID will be used for the study. The dependent variables used in the study are Income diversification *viz.,* farm income, non farm income and off-farm income and Household well being. The list of variables will be identified and extracted for measurement of household well being of the farmers. Age, educational status of the household, household assets, dependency ratio, land holding size, extension contact, farm size, no of livestock and other factors will be selected as independent variables by in depth review of literature related to the study. The state Uttar Pradesh and Haryana are chosen purposively for the study. The aspirational and non-aspirational district from the Niti Ayog list (Aspirational districts, Niti Ayog, 2018) will be taken and five villages each from the aspirational district of Haryana and Uttar Pradesh and five villages each from the non aspirational district of Haryana and Uttar Pradesh will be taken for study. Based on the population data through secondary sources, through proportionate random sampling 2000 farm household will be selected for the survey. Primary data will be collected through personal interview method by using interview schedules. Suitable Parametric and Non-Parametric statistics will be used to analyse the data. Statistical packages such as SPSS, SAS etc will be used to analyse the data.



Source : Ashley and Carney (1999)

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Innovativeness in the proposed research

With the change in the climatic pattern, market demand, price fluctuations, natural resources there is a need to diversify the agriculture to make it more profit oriented and remunerative. The focus of the present study is on the relationship of income diversification and the household wellbeing. The Niti Ayog has identified the asp rational districts with the objective to quickly and effectively transform by raising the living standard of its citizen. Hence, the focus of the proposed study is on developing income diversification strategy framework and documentation of successful livelihood diversification cases for up scaling for enhancing the household well-being of the farmers.

Relevance of the proposed study for policy-making

The research outcome will be useful to understand the income diversification pattern and help to guide policy for the aspirational district using income diversification strategy framework for enhancement of livelihood. It will help the policy makers to understand the indicators of household well being while developing policy framework of the farming household.

Relevance of the proposed study for society

The proposed study is intended to identify the profitable agricultural and allied enterprises which can be taken up in the district for enhancing the income and livelihood of the farmers. The documentation of successful livelihood diversification model will be useful for the policy makers and extension professionals at the district level to out scale the technological interventions.

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