

Livelihoods security options for small and marginal farmers in forest fringe villages– Land use options for environmental and livelihood security

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1. Introduction

1.1 India has 67.71 million ha forest covering 20.6% of country (2010). India Consists of 5,87,274 villages and villages close to Forests are 1,70,379 (29%). 60.04% of forest cover lies in 187 tribal districts although geographical area of these districts is just 33.6% of the geographical area of the country. [Source F S Report, 2003].

1.2 Indian forests are under severe pressure for fuel, fodder, grazing, timber and NTFP. The population of India has increased from 390 million in 1950 to 1 billion in 2001 to 1.21 billion in 2011. 8430 million tribal population depending on the forest (census 2001). The primary source of livelihoods of forest fringe people in our country is mixed subsistence farming, where, 70% farmers are involved. Over the years many changes have been taking place in terms of land resource allocation, production and productivity of cereal food grain crops, horticultural crops, livestock structure and composition. These are generally influenced by availability of forest and other natural resources, input services, market and other socio-economic infrastructures along with the institutional arrangements, technological support system and the policy issues.

1.3 Farming system in forest fringe villages mostly rely at all levels on the value of the services flowing from the total stock of assets controlled by the local community most of whom are small and marginal farmers. The five categories of assets envisaged by the sustainable livelihoods framework of DFID i.e., natural, social, human, physical and financial capital are transformed by policies, processes and institutions to give either desirable or undesirable outcomes that when achieved would either help either build up or erode the asset base for livelihood generation. This eventually determines the risk taking capacity of small and marginal farmers for livelihoods promotion. Sustainable systems accumulate stocks of the five types of assets, thereby increasing the per capita endowment of all forms of capital over time, unsustainable systems deplete or "spend" assets, leaving less for future generations. The challenge is to enhance the livelihoods through forest fringe agrarian economy by eliminating the negative functions and promoting the positive functions.

2. Understanding vulnerability of forest fringe population

Let us first understand the context of forest fringe farmer whose wider availability of assets for secure livelihoods are fundamentally affected by factors like inaccessibility, marginality, diversity and niche. The critical challenges of productivity in forest fringe farming are land size of marginal farmers, its dispersion, marginal and inaccessible lands, animal and wildlife threat, health of commons, climate and above all, the isolation from the market economy. The forest fringe farmers in their bid to maintain their livelihoods under the complex challenges have adopted multiple strategies to cope with such limitations. These include, among others keeping large herds of unproductive cattle and increasing male migration to urban areas and extending cultivation to marginal areas. The result in major cases has been marginalization of land, increased land degradation and increased drudgery of women ultimately leading to endemic poverty and deterioration of forests near these villages.

So the vital question arises - How to ensure livelihood and food security for the forest fringe poor? What are hopes and options? How we preserve environment and rich bio-diversity of forest fringes in a landscape approach?

To answer the above questions, one need to look into the following livelihood determinants and their management functions into the livelihood strategy.

2.1 Marginality and multi-functionality - forest fringe context

By concept, forest fringe marginality mainly concerns with inaccessibility, assetlessness due to economic and ecological disparity of poor forest fringe farmers. But one need to understand that marginality itself is a dynamic process in the forest fringe context. Forest fringes at the same time provide diverse ecological niche, rich in biodiversity that provide multiple livelihood support through ecosystem services and food security from forest products in different forms for direct consumption and for merchandising. Thus the distinctive feature of forest fringe ecosystem are both the multi-functionality and the marginality. Thus, a land unsuitable for rice due to topography, lack of irrigation, could be highly productive for fruit or livestock farming. The forest and grazing lands are the foundation upon which sustainability of forest fringe farming system is based and thereby food security and livelihood generation of marginal people. The challenge is also to conserve the natural resources, maintain and use the valuable agro-biodiversity to generate and promote the technologies specific to niche agro-ecological conditions for greater economic and ecological returns.

Diversification of farm activities into high value commercial crop and processing of agricultural and other natural resources based materials, is therefore, the most logical step towards improving the economic levels of the forest fringe poor. So far, the agro-enterprises has marginally tapped this potential from the biological diversity. The diverse agro-ecological conditions prevailing in the forest fringe form niches for horticulture, floriculture, spices and medicinal plants and livestock needs to be harnessed. But it is easier said than done. Why it is so?

2.2 Core determinants of receptivity of initiatives

Till date, it has been clearly seen that innovative research, policies and programmes cannot start from sectoral (agricultural, horticulture, livestock etc.) research and extension and move towards poverty. The starting points has to be analysis of the different types of poverty, their determinants, the contexts in which they occur, and the livelihood strategies that the poor implement to respond to their condition. The more we move into conditions of poverty, deprivation and unfavorable environments, the greater is the need for these types of broad-based approaches in research and policy. We wonder why many of the research outputs deriving from commodity approaches have been rejected by the poor.

2.3 Property rights, tenure security and livelihoods

Property rights and land tenure security are often overlooked in forest and agricultural R&D efforts; yet they are frequently the main factors influencing the choices and decisions of the forest fringe poor with regard to land management, cropping practices and livelihood strategies. The manner in which land is regulated, rights are assigned and conflicts are resolved determines the incentives and opportunities available for the rural poor. Asset ownership by the rural poor, good governance and political stability are essential requirements for broad-based economic growth of forest fringe communities. In the past state's approach to customary land rights in forest fringe areas favoring the market agencies to acquire and control the access to natural resources (forest, water, cropland, scenic spot, mineral deposit etc) in the name of promoting development have drastically effected the poor in many instances. It will be interesting to further analyze, as a part of ongoing research, as to how the agencies and actors in the governments and the market framework conditions integrate the tenure security of the tribals and forest dwellers under Forest Rights Act 2006 with sustainable livelihoods options and initiatives to allow forest fringe functions sustain biodiversity rich sustainability.

2.4 Collective action for livelihoods security

Collective action is crucial for forest fringe farmers; first, to gain access to or defend natural assets like forest and water; second, to transform their assets into income; and third, to connect with the market, state and civil society organization that structure the ways in which assets are acquired, protected and transformed. Understanding and factoring collective action into research and policy design will be crucial in addressing the development of the forest fringe villages in an ecologically sustainable manner...

The forest fringe farm enterprises lack far behind in organizing production systems to meet market demands. The farm enterprises need to invest resources in organizing production systems with product benchmarking, that are backed by strong market research that enable local, regional and global partners work for the hinterland farmers.. It is equally important to enhance the transaction governance capacity of the hinterland farmers to enable them work with different stakeholders and trade partners at a level playing field. Forest fringe farmers need to know trends and shocks of market. Farmers' own organizing power will go a long way bring down the input cost. Works under Corporate Social Responsibility if any should not only be confined to socio-economic activities but developing green value chains.

Similarly, there is tremendous potential for an array of input services that can help organize farm based micro-enterprise activities - presumably to be taken up by the local youths that could prevent out migration. Government at this juncture need to co-partner with various national and international, public and private sector agencies to co-invest meaningfully in building transaction governance capacity of forest fringe youth for a better bargaining power under the market framework conditions that confirm to fair trade practices.

Development of necessary infrastructures, input supplies, industries and marketing system and other logistic supports are vital to bring sustainable impacts. It is vital to attend livelihood concerns of forest fringe people with the conservation realities of the landscape.

2.5 Ecosystem services and livelihoods

Marketing ecosystem services from the forest fringes provides new opportunities for forest fringe farmers although these are continuously influenced by increasing demands and policy instruments from global and regional urban centres. The state needs to develop mechanism for building ownership and distributing benefits from ecosystem services in favor of local communities. Here, the communities institutions need to be capacitated for internal monitoring and putting value on ecosystem services. The other area where the forest fringe is distinctively positioned to serve the clients directly is ecotourism, where, livelihoods can be harnessed from activities most suited to farmers' resources, skills and interests. It has been seen world over that careful skilling and involvement of local youth in the value chain process of ecotourism products and services prevents outmigration on one hand and help bring up youth leadership locally as real custodians of the natural resources.

2.6 Harnessing Biodiversity and indigenous knowledge

Focus on women, equity targeting, up scaling the indigenous knowledge for promotion of low cost self help technologies, product diversification and risk mitigation in farming will go a long way in favor of sustainable development of the forest fringe community. Globalization has posed new challenges as well as opportunities on use of indigenous knowledge by the farmers. There is need to identify policies that can promote the positive impact of agriculture on biodiversity, while also enhancing productivity and the capacity to sustain livelihoods by expanding the knowledge, understanding and awareness of the multiple goods and services provided by different levels and functions of agricultural biodiversity.

Marketing vision for biodiversity promotion and sustainable livelihoods

1. Here economies of 'scope', not of 'scale', are the key when we promote niche biodiversity. Emphasis to be on commoditising scope of intangibles than the scale of tangibles in products and services.
2. Brand positioning is very important to address livelihoods through ecologically sensitive agenda. Investing wisely in umbrella brand development to reflect the spirit of the landscape approach to be the first initiative of the approach – Ecolabels/ Geographical indications : shade, biodiverse, organic, natural etc would grow and play within the umbrella brand, where diversity, niche and small farmers can participate more equitably than in 'stand alone biodiversity friendly marketing effort' (Chattisgarh Herbals of Chattisgarh state is such an example although)
3. Value chain process positioning in the market to encourage biodiversity and food security in inhabited corridors and transition zones. Emphasis on the basket of value chains (VC): main VC (e.g. Nature Based tourism/ rural tourism), supporting VC (e.g. Wellness tourism/ aromatherapy) and vector VC (e.g. beekeeping). Here 100% vermicompost adoption village or a cluster of villages could be organically certified.
4. How equity and gender issues would be processed in the product development? How it is going to get reflected and harnessed in brand positioning and labelling such as FAIR TRADE.
5. Role of financial products and services forest fringe villages mitigate emergent man animal conflict due to crop loss, attack, mitigating shocks of climate change on crops of the small farmers

2.7 Social investments and livelihoods

Investment of the government in the field of social sector triggers like health, education, sanitation, nutrition and women's empowerment are the footholds of strengthening the forest fringes socio-ecological environment. Placing right governance and institutional policy from much desired landscaping perspective needs to involve women in community based interventions, regional and multi-local networking, institutional support and policy making.

2.8 Employable skill development and migration support

The aspiration of youths in the forest fringe villages are fast changing. Given the gap of the skilled manpower in the country, the government is aggressively pursuing youth skilling program. The employable rural youth skilling for peri urban areas are expected to rise in the future. This could help reduce the pressure on natural resource for subsistence needs in the villages. But it has been observed that most of the youth skilling program existing as of today are male population oriented and migration oriented. It will be interesting to see as a part of ongoing research how such gender issues will effect the conservation governance and environment leadership qualities of youth population in the forest fringe villages. A large forest fringe population migrates seasonally as labour force to the nearby and distant cities. Migration support initiative on social security issues of migrant families both at migration destinations and in the home front would reduce vulnerability of forest fringe households. Enhancing the skill set in the traits has to be an important and integral strategy in the forest fringe villages.
