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Strategies For Natural Resource Management in Sustainable Rural Livelihood in Jorhat District

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ABSTRACT

Human beings depend for their livelihood, well-being and very survival on the resources they derive from the environment. There exist a link between rural livelihood and natural resources. The main livelihood in rural areas is agriculture and the agriculture sector depends on natural resources like soil, water, vegetation, climate etc. With the present trend of population growth, the resources are in tremendous pressure. There is intense competition for the nation's limited natural resources that is leading to quarrels between states, between communities, and even disputes within families. Proper identification of livelihood resources at local level and establish relationship between sustainable rural livelihood and different resources is an interesting field of investigation in Jorhat district.

Keywords: Sustainable development, resource management, ecological balance, livelihood resources

INTRODUCTION

The growing population exerts pressure on agricultural land, causing environmental degradation, and forcing the cultivation of land of poorer and poorer quality. The environmental degradation ultimately reduces agricultural yields and food availability and it questions about the sustainable rural livelihood. This type of agriculture situation never leads to 'Sustainable rural livelihood'. The stress on the resources can be reduced or minimized through proper utilization of resource. Sustainable rural livelihoods can only be achieved if resources are themselves used in sustainable ways. Hence in order to sustain the rural livelihood, it is important to sustain resources in scientific way. Food security and environmental quality are the important aspects of Sustainable rural livelihood. The stress on the resources can be reduced or minimized through proper utilization of resource. At the same time resource management is important for sustainable rural livelihood at micro level in the Jorhat district..

OBJECTIVES OF THE STUDY

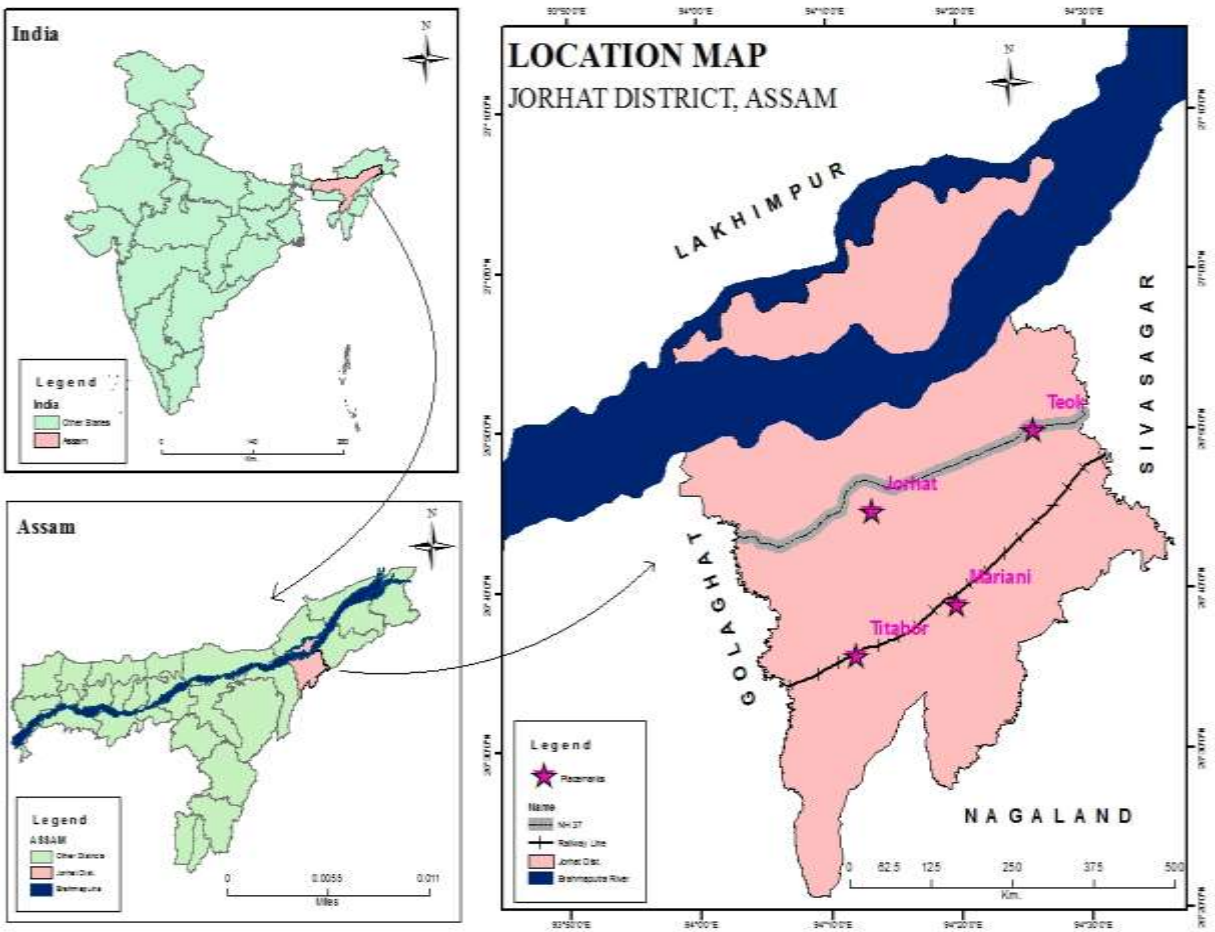
To study the strategies for natural resource management in sustainable rural livelihood in Jorhat District

METHODOLOGY

The study was carried out both at theoretical as well as empirical levels. The required information's are collected from both primary and secondary data sources. Primary data and information are collected through field observation. Secondary data are collected from various relevant books, journals, newspapers, government offices including Majuli Forest Division etc.

STUDY AREA

The study area is the Jorhat District of Assam. It is situated in the Eastern part of Assam and bounded on the North by North Lakhimpur district, in the East by Sibsagar District, on the South and South-East by Nagaland State and in the West by Golaghat District of Assam. The district is located between 26º20' to 27º10' North latitudes and 93º57' to 94º 37' East longitudes covering an area of 2851 sq km. accounts for about 2.3 percent of total geographical area of the State.



Map 1: Location Map of Jorhat district in India and Assam

Suggestions or Strategies for Natural resource management in Sustainable Rural Livelihood

1. The villages of Jorhat need special attention in the area of flow of resources and higher level of subsidies for exploiting the tremendous regional potential. The regions have the potential to improve in the agricultural sector. The constraint areas lie in lack of infrastructure development, resources/credit flow, high transport cost etc, needs to be addressed to. Extension services through demonstration and training to the farmers assume considerable importance. A substantial portion of investment is needed for water management for increasing production and for increasing consumption of fertilizers. The multi agency network consisting of cooperative, commercial banks and regional rural banks should play a dominant role in agricultural credit disbursement.
2. In the rain fed areas, watershed management is seems to be important factor in improving the agricultural production. Integrated farming systems should be practiced in Jorhat through self-help

groups or other institutional process in the micro watersheds to institutionalize people's participation.

3. The agricultural production strategy should focus on flood control, drainage management, improve irrigation facilities particularly minor irrigation and a better input delivery system supported by extension.
4. The Rural Infrastructure Development Fund (RIDF) which was envisaged in the Ninth Plan should be used to promote projects which encourage organization of small farmers, artisans and landless labourers for skill upgradation, processing of agricultural products, transport infrastructure, and quality improvement in the agricultural products.
5. There is a need for infrastructure facilities like cold storage and processing facilities close to the production centers in rural areas. The cold storage is the urgent demand for the villages having huge production. Due to shortage of storage facility the vegetable products gets destroyed.
6. Efforts are needed for the use of marginal, wasteland and community lands for agro forestry, which can substantially; improve the economy of the people. The government should initiate pilot projects on dry land for agriculture. The land reform measures are far behind the other States, which is a must for helping the poor by way of distributing land to the landless and also for agricultural growth.
7. In Jorhat there is no dearth of green manures and the same can be used with a clear advantage. Thus there will be sustainable agricultural growth as there will be socio-economic and ecological balance too. However the organic manures required per hectare of land is double (e.g., vermicompost) than that of chemical fertilizers. But the benefit derived from the use of organic manure is many times more than that of chemical fertilizers.
8. The application of Organic farming is much useful. The clear advantage of organic farming is manifold since it helps controlling the pollution factors including the degradation of environment and above all the sources viz., vermicomposts, biofertilizers etc, are quite cheaper which the farmers can use easily. When there are sufficient quantity of earthworms in a field, they enrich the soil by supplying sufficient manures, provided, they are taken care of by providing food for them. Organic farmers do not simply leave their fields to nature, they have to use knowledge, techniques and products available to work with nature. In fact, the earth should be made free of chemical poisoning to supply poison free health nourishing food for all. Through the organic farming, recycling crop residue in soil will multiply soil organisms and would create soil humus and a pest resistant soil climate. And in the economic front, the organic farming will help to curtail valuable foreign exchange and thus the import of petroleum products for producing harmful chemical fertilizers and pesticides will be minimized.
9. Improve access to rural financial systems so that poor people are able to participate in the livelihood activities that require an initial financial investment. Without the initial capital to buy cattle, tools, plows, or construction materials for example, the poor are excluded from participating in many of the most attractive diversification activities.
10. The diversification of agricultural and other livelihood strategies, through community development activities, eases the pressures on weakened environmental resources, making livelihoods more economically and environmentally sustainable.
11. Reduce the risk of production failure by increasing the number of alternatives for sustainable production strategies, leading to greater stability for the local population.
12. Improve access to markets by increasing transportation options, and improving roads and

communication systems. An individual's access to markets for labor, goods and information along with their urban social connections are critical determinants of their position within the livelihood framework. Livelihood activities that have a broad reach outside of the village are more profitable than activities restricted to the household or village level.

13. Increase education and innovative skill training. Specific skills are necessary for nearly all non-farm activities. Non formal education in the areas of accounting, adult literacy, and skill training for activities such as bike repair, tailoring, bee keeping, fabric dying, soap making, marketing, embroidery, and weaving should be encouraged alongside the formal education systems. Innovative training programs might also focus on skills that could open up more lucrative migration opportunities for men and women.
14. Strengthen activities that have been shown to be pathways to improved livelihoods. For women the activities such as gardening, commerce, collecting forest products and animal raising etc. Activities that are pathways to livelihood improvements for men include migration, animal raising, and commercial and service enterprises.
15. Community mobilization and training can contribute to improved land management and a more secure environmental and social asset base. This, in turn, increases the community's resilience to climate-related shocks, such as drought.
16. The long-term improvement in natural resource management and land rehabilitation can only be accomplished by meeting the short-term survival and production needs of villagers.

- Different Plans are required to minimizing the risk of contracting waterborne diseases, to provide optimal health service for the population.
- System assessment – to determine whether the drinking water source and supply chain as a whole can deliver water of quality that meets health-based targets.
- Operational monitoring – to identifying control measures in a drinking-water system that will collectively control identified risks and ensure that the health-based targets are met.
- Management plans -- Test the drinking water twice in a year to ensure that it is safe. It also includes the spreading of knowledge to the rural masses about the harmful water borne diseases and its impact on health, through local survey by water resource department or by organizing workshop in rural areas to provide knowledge about water related problem by the concerned departments.

17. The demand for forest resources is present in every villages specially, bamboo, hashi tree etc. But due to increasing population and due to increase pressure on land this valuable resource is depleting very fast. So, there should be implementation of Social Forestry and community forest in every village. People are exploiting these resources only, without thinking of future outcomes. So, the scientific application must be there while exploring these valuable resources. Some rules must be implemented on this social forestry or community forestry, so that people not only recklessly cutting trees for their own use but also raise more trees.
18. There should be more encouragement towards Self-help groups, handloom, handicrafts activity, farm activity like livestock and fishery and non-farm activity to maintain the good flow of sustainable development. Because if agriculture fails then these activities act like a great support to the rural people.
19. For empowerment of farmers and sustainable agriculture following steps can be taken:

- The farmers should have direct access to the resources at the centre in terms of technology and

advice with a provision of a system for feedback.

- Promote Organic farming among the interested farmers through proper technology and guidance.
- Create awareness programme on biofertiliers, vermicompost and organic manure to maintain crop production and also to maintain soil fertility.
- Innovation of agricultural technology information centre with video conferencing facility that helps the farmer to develop new ideas.
- Demonstrate water-harvesting technology to the farmers and initiate their participation on irrigation management.
- Providing regional facility for training on ecological conservation and scientific use of land and water resources.
- Community Development: through small irrigated vegetable gardens, water well construction, energy efficient fuel stoves, and the use of mud brick versus timber construction of houses and various other associated activities that helps the farmer to generate more ideas.

CONCLUSION

The concept of sustainable development dwells on a symbiotic relationship between consumer human and producer natural resources. The goal of sustainability is for equity and social justice, economic efficiency, ecological harmony and endogenous choices. The strategy of sustainability includes improving the quality of human life while living within the carrying capacity of the supporting ecosystem. Sustainability is compatibility between ecology and economics. Sustainable development must meet the needs of the present generation without compromising the ability of the future generations with reference to their aspirations and needs. Therefore, the exploitation of resources, the direction of investments, strategies and institutional changes are to be consistent with future as well as present needs. Sustainable development is promotion of ecological sound agriculture with reference to land, water, energy, genetic diversity and development.

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