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Community pasture development as an approach to common property resources management in Rajasthan, India

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Introduction

Semiarid areas of the state of Rajasthan have community lands in almost every village. Most of them are grouped under wastelands and are usually covered with coarse grasses such as *Dichanthium*, *Cenchrus* and *Lasiurus*. Grass growth on these lands faces constraints such as extreme temperatures, steep slope, variable precipitation and scarcity of water in general. Land degradation has created tremendous pressure on increasing livestock, especially the goat population. As pasture management and enhancement of productivity of improved grasses were key factors to sustain livestock through common property resource management, BAIF Development Research Foundation, a rural development organization, implemented projects about 15 years ago. This silvopasture approach to common property resource (CPR) management was demonstrated in district Bhilwara with the support of Ministry of Rural Development. A total area of 2550 ha in 76 villages was brought under silvopasture by treating the land with principles of watershed treatment. Community lands developed in this manner have been managed by Gram Panchayats and Village Management Committees after the project implementation phase ended. The paper deals with post management experiences of silvopasture farms / grass lands.

Materials and Methods

Returns in relation to investment were analyzed with quantitative information maintained over the years. In addition, community perceptions were obtained through group discussions and village meetings conducted in six villages of three blocks of district Bhilwara. Mapping of vegetation and grass covers were recorded based on visual observations during plot survey. Plant population was recorded in 25 m x 25 m quadrants. Management practices adopted in managing the plots were discussed with respective Village Management Committees (VMC) with a pre-tested questionnaire.

Results and Discussion

The development approach focused on technical interventions based on category of land, type of grass cover and community participation through institutional building. The community was sensitized on the concept of CPR management considering livestock population, available pasture land and ownership of revenue village involving each family. Participatory planning was done with at least 50% of the pasture land reserved for traditional grazing and the remainder developed under the proposed model. Grasses and tree species were selected on the basis of technical recommendations and community preferences. Each silvopasture plot was managed by a VMC or Gram Panchayat. Livestock keepers are free to cut grass at the time of designated harvesting, but are required to return 50% of the grass to VMC. VMC generated funds by the sale of grass and the proceeds were used on expenses such as security men.

The commonly grown grass was Dhaman (*Cenchrus*). The average annual dry fodder yield was 1.8 tons per ha during the first five years. In silvopasture plots developed 15 years ago, a problem encountered is the declining productivity of grass. It was observed that VMCs preferred to harvest the grass early which resulted in removal of the vegetation before seed fall, resulting in reduction in establishment of new plants. Consequently, dry fodder yield was reduced to 0.3 tons per ha in some cases.

This study showed VMCs are managing the plots efficiently. Goat keepers are at the tail end of the benefit chain and large ruminant holders are at the head of the chain. Presently, goat keepers are not getting full benefits from pasture lands due to social fencing and declining production. During first five years, VMCs were getting an average annual returns of Rs.6407 per ha. and ratio of investment to returns was 1:5.4. However, this ratio has come down to 1:2.4 at present.

Conclusion

This approach is not based only on physical interventions, but requires community mobilization and capacity building to manage the plots efficiently. Study indicates that technical facilitation is required always to ensure economic viability by binding of community through the strength of village institution. The community pasture development is one of the ways

to enhance prosperity of villages. This can be scaled up through central and state government programmes. This is also a strategy to prevent unauthorized possession of common lands in rural areas. Re sowing of Dhaman (*Cenchrus setigerus*) seed, seed production and aggregation of farm produces should be recommended on existing pasture farms to enhance the returns and productivity. A wider programme should be planned involving expert civil society organizations and regional research institutions.