

## Good Practice Note

# Enriching Community Pastures



**REGION** : South Asia  
**COUNTRY** : India  
**STATES** : Rajasthan  
**DISTRICT** : Bundi

**SOUTH ASIA**  
**Pro Poor Livestock Policy Programme**  
A joint initiative of NDDB and FAO

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## Enriching Community Pastures:

*Villages of Gudha Gokulpura in Bundi, Rajasthan take the Lead*

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# 1. Introduction

Common lands in villages of India, often referred to as Common Property Resources (CPRs), play a crucial role in sustaining and enhancing the livelihoods of rural poor by providing a wide variety of essentials like food, fodder, manure, medicinal herbs etc. (Jabir Ali, 2007). In India, there is high dependency on CPRs for feed and fodder for the livestock sector as a sizeable number of livestock rearing families belong to landless, marginal and small land holding categories who are extremely poor. Simultaneously, a number of studies indicate that the area under CPRs has declined in most parts of the country due to several reasons thereby increasing the pressure on the available CPRs (Jodha, 1990). Hence, sustainable management and development of common lands becomes a crucial component in poverty alleviation.

## 1.1 Common Land in Rajasthan

Use of common lands in Rajasthan has not been regulated resulting in open access which has led to degradation and over exploitation of the CPRs. With the increasing livestock population there is an uncontrolled pressure on available grazing resources in the villages by large and small ruminants. Encroachment is widespread and has been going on for several decades, particularly since independence in 1947 (Jodha, 1990).

Under the Rajasthan Tenancy Act (1955), pasture land (*charagaha*) is defined as land used for grazing by cattle of a village or villages or recorded in the settlement records as such (cited by Saint, 1993). The common lands are under the jurisdiction of the *Panchayat* – the lowest tier of local Government. Many rural livestock keepers are small and marginal farmers who do not have sufficient land give preference to growing food crops in comparison to fodder crops. For them the village common land is a vital source of forage. Common lands provide fodder for livestock in the form of either grass for large ruminants or tree fodder for small ruminants.

Development programs are interested in restoring village common lands as it has a direct impact on the food security and livelihoods through improvements in biomass production and conservation of bio-diversity. As a result of soil and water conservation measures there is ground water recharge and improvement in water regime for crop cultivation. In the process of village common land development there is community mobilization and capacity building of the stakeholders involved in various field interventions.

**District Bundi** is the smallest (area 5.82 lakh ha) district of the 32 districts of Rajasthan. Semi-arid with mean annual rainfall of about 420 mm, the district falls under drought prone category. A large number of traditional wells support a predominantly agricultural economy. Around 60% of the land in the district is under cultivation. The fertility and productivity of the land varies radically over different parts of the district. The three major crops grown are wheat, rice and maize (BAIF 2003).

The **Hindoli Tehsil** is in the North West of the district where the project was located. The *Tehsil* is mostly hilly with stony, hard soil and is the most backward in the district. Scheduled caste and scheduled tribes, who are socio economically backward, constitute around 40% of the population.

## 2. Project Location

### 2.1 Village Profile

Gudha Gokulpura with 270 families and total population of 1,285 is divided into five hamlets namely, *Khet ka Jhopda*, *Devpura*, *Padiya Pahda*, *Mavika Pahda* and *Regar Basti*. With 55.5% males and 44.5% females, the sex ratio in the village indicates a very low status of women in the community. Male and female literacy level is 64% and 16% respectively (Baseline Survey Report, 1997). The village is located around 30 kms from Bundi. The common mode of public transport is privately run jeeps. The village has to depend on neighbouring village *Thana* that has electricity, a secondary school, few private doctors and shops.

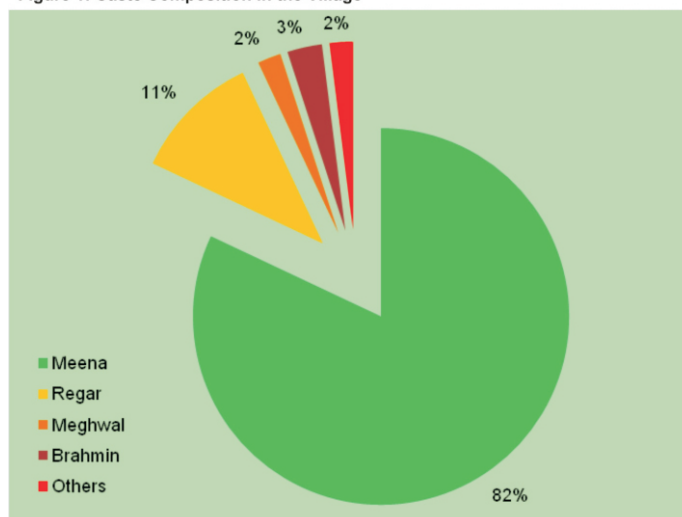
### 2.2 Social Structure

This multi caste village is dominated by the *Meena* community along with households belonging to *Regar*, *Baret* and *Meghwal*. Of the families, 82% belong to the *Meena* tribe and 18% are *Regar* and other castes (Figure 1) (Secondary Data Report, 2007).

*Meena* tribe dominates the population in the villages and was once the ruling class. This community displays dominating behaviour over the other tribal groups. It has a patriarchal society in which men take all the decisions

but do little work. Women do all the housework, from grinding flour, fetching water from a distance, collecting firewood to the backbreaking work in the fields during the sowing and harvesting season, but have very little or no say in decision-making.

Figure 1: Caste Composition in the Village

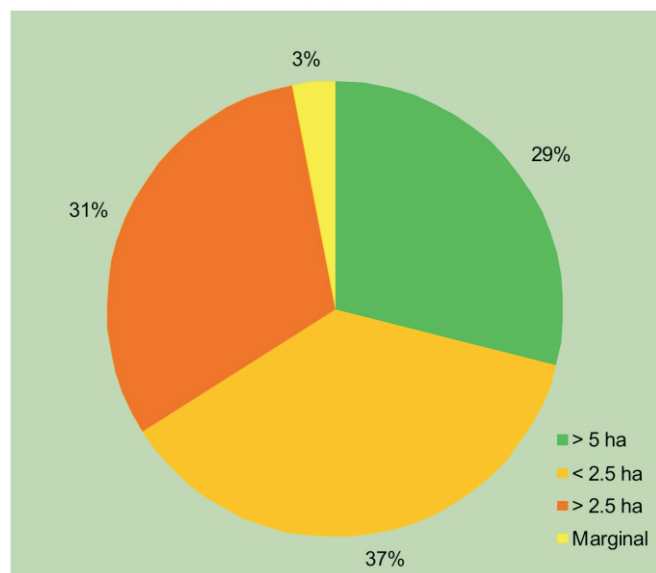


### 2.3 Agro- Climatic Conditions:

Topography of the village is mostly hilly and undulating. The soil is medium black with low to moderate percentage of carbon and very low percentage of available phosphorous (Baseline Survey Report, 1997, P 5). The problem of marginally productive soils is further aggravated by poor rainfall. Normal rainfall is 450-750 mm. This occurs during July to September. January is the coldest month with minimum temperature of 12°C while May and June are the hottest months in which the temperature soars to 41°C.



**Figure 2: Composition of Land Holdings**



## 2.4 Land Holdings

The village comprises of 68% small farmers, about 3% are marginal (including 2.7% who are landless) and 29% have land holding above 5 ha. About 37% families have less than 2.5 ha of land and 31 % have 2.5 to 5 ha. (District Census Report-1991)

## 2.5 Crops and Livestock

Mixed farming of crops and livestock rearing is traditionally practiced in the area. Maize and wheat are the common crops, sown in *Kharif* and *Rabi* seasons respectively. Wheat is

grown where assured irrigation facilities are available. However, 30% of the households having small land holdings do not enjoy food security.

Almost all the households own livestock as a means of supplementing family incomes and as cash insurance during crop failures. Livestock population comprised of local cows (312), cross bred cows (06), buffaloes (85), sheep (250) and goats (850) (Secondary Data Report, 2007). Goats were reared as a source of supplementary income by the households. However, there was no income from sale of milk as whatever little was produced was consumed by families themselves.

## 2.6 Common Land

Common land in Gudha Gokulpura constituted 75 ha and was barren with very little grass cover. This was due to hilly, undulating terrain resulting in erosion of good top soil and, thereby, reducing tree and grass cover. In 1997 when development activities were initiated, the priority was to improve the productivity of the village commons in order to meet the fodder and fuel wood requirements leading to a reduction of drudgery for women. Women spent on an average two to three hours daily for meeting the domestic requirements of drinking water, fodder and fuel-wood.

## 3. The Good Practice

The note presented here showcases the involvement of the community in developing the commons belonging to Gudha Gokulpura village of Bundi district in Rajasthan, India. Acknowledging the importance of village common land restoration in the area, the work was taken up as an entry point activity under the BAIF-ICEF<sup>1</sup> project. Developing rain-fed pasture on degraded village commons has led to an increase in fodder resources for poor livestock families, which in turn, has led to positive impacts on family incomes and nutritional status. A participatory mechanism of creating a village level management committee has strengthened the *Panchayati Raj* System (PRS) and revived the tradition of safeguarding village commons in a sustainable manner. The approach is holistic and addresses inequalities between resource rich and resource poor farmers and empowers the community to manage their CPRs.

### 3.1 Stakeholders of the Good Practice, their Roles and Responsibilities

The **India Canada Environment Facility** (ICEF) financially supported the project which was conceptualised and implemented by BAIF Development Research Foundation (BAIF), a National NGO having its headquarters at Pune. Field implementation was done through RRIDMA, BAIF's associate organization in Rajasthan. BAIF's cattle breeding centre in *Thana*, provided artificial insemination and health care services and monitored feeding and management practices. A livestock supervisor was stationed in the village to provide services to the cattle owners in the area.

**BAIF** provided guidance in forming a Community Pasture Management Committee (CPMC) with due representation from each caste. The President and Secretary were selected through a participatory approach by common consensus of the members. This committee was responsible for implementation of activities on the village common land with technical support from BAIF.

The **Rajasthan Rural Institute of Development Management** (RRIDMA) was responsible for overall coordination of the project at the State level.

The **Local Panchayat** was responsible for land allocation for silvipasture development. The villagers were in charge of management and use of CPRs. They were also the prime beneficiaries of the project. The *Gram Sabha* would constitute and elect members to the CPMC by consensus.

**District Collector** intervened to resolve conflicts arising out of ownership and management issues. The village *Panchayat* was interested in taking over the management of the common land, once revenues started getting generated. The District Collector intervened and managed to retain the neutral, independent identity of the CPMC. However, the community was asked to take the *Panchayat* into confidence and present accounts in the Gram Sabha every six months.

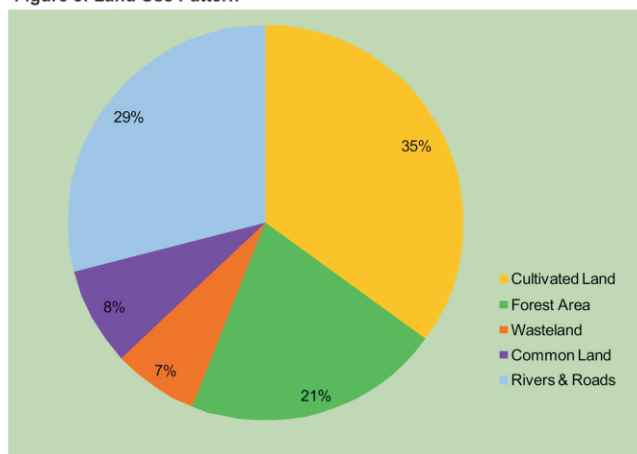
\*India Canada Environment Facility (ICEF) a joint initiative of Government of India and Government of Canada funded a seven year (1996-2003) project to BAIF Development Research Foundation (BAIF) working with local community and government officials of the area. The broad objective of the project was water resources development and energy conservation for sustainable management of the Environment. The project was implemented in Rajasthan, Uttar Pradesh and Karnataka.

## 4. Problems Identified

### 4.1 Low Crop Production and Inadequate Food Resources

Small land holdings, marginally productive soils and erratic rainfall caused low agricultural outputs which in turn had a negative impact on the food security. As indicated in Figure 3, out of a total of 946 ha, 336 ha (35%) was under cultivation, 195 ha (21%) under forest, 75 ha (8%) common land, 69 ha (7%) wasteland and 271 ha (29%) not available for cultivation (under rivers and roads) (Secondary Data Report, 2007). Maize and wheat were the common food crops with low productivity. Around 30% of the total no. of HHs had to work as wage labour.

Figure 3: Land Use Pattern



### 4.2 The CPR

The village common land (75 ha) that was used for grazing was over-grazed, barren and had poor soil cover. Inadequate fodder for animals all the year round resulted in low productive animals which produced milk sufficient only for home consumption.

### 4.3 Encroachment

The common land had potential to produce enough fodder for village cattle and also to serve as a source of income. However, this could be realized only if effective steps were taken to stop encroachment of land. Villagers were of the opinion that restoration work should be taken up on a part of the grassland. As these people had no other source of fodder, enclosure of the entire plot would have created fodder related hardships for them.

Regeneration activity on 45 ha of common land was, therefore, proposed under the BAIF-ICEF project with the following objectives:

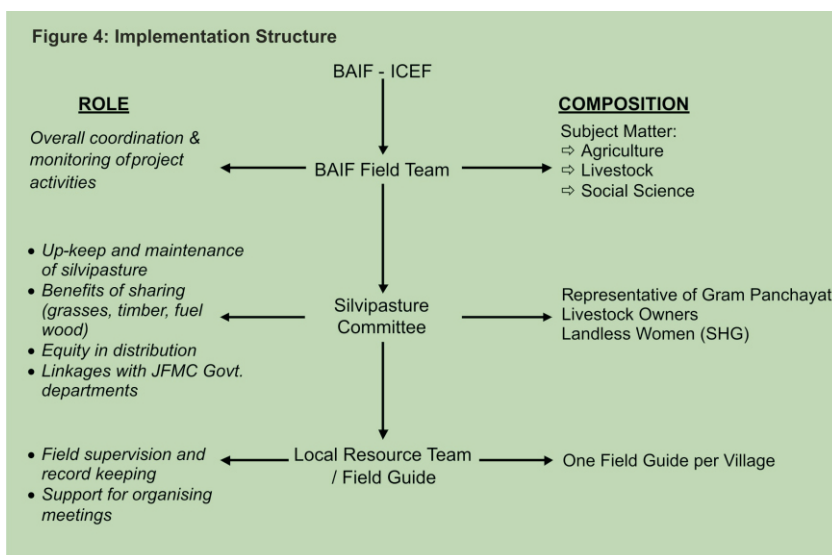
- ☞ To develop the village commons in order to increase the availability of feed resources for livestock.
- ☞ To demonstrate the potential role of regenerated village commons in providing support to livelihood opportunities of the communities.
- ☞ To empower the local community supported by local institutions to carry on the activities undertaken in the future.



## 5. Delivery Mechanism

BAIF had a presence in *Thana* village located in the vicinity prior to initiating work in Gudha Gokulpura. A cattle development centre was operational in the village since 1990.

At the field level BAIF team was responsible for overall coordination and monitoring of project activities. The resource specialists in the team came from diverse backgrounds like agriculture, livestock and social sciences. The BAIF team helped to form the CPMC which had amongst its members BAIF Program Officer, Gram Panchayat representatives, Livestock Owners, Landless people and village representatives from each caste. This ensured democratic functioning of the CPMC. The CPMC ensured the maintenance of the village common lands, equitable distribution of biomass resources and linkages with the Government. There was a resource team at the field level comprising of Extension Officers who were in charge of field supervision, record keeping and organizing local meetings. The



Delivery mechanism / Implementation Structure is illustrated in Figure 4 and enumerated below:

**Community Pasture Management Committee (CPMC)** was formed for management of the grass land developed on 45 ha of *Panchayat* land. The committee was selected by electing one representative from each of the hamlets and two women representatives from the self- help groups. A representative from the *Gram Panchayat* was selected as President of the Committee. A senior staff member from the Field Team was nominated as Secretary with the responsibility of ensuring democratic functioning and transparency in the dealings. Since inception of the work four such Silviculture Committees were setup to manage the village common land.

Resource team of local beneficiaries and field guides were selected in order bring forth change and development. Village youth having inclination for development work were selected to work as Field Guides. Resource persons selected from beneficiaries, after intensive training provided by BAIF, helped in field monitoring (Ghorpade, A and Naik, S, 2002).

**Basis for the interventions:** Location specific interventions were selected for village common land development keeping in view the overall objective of water resources development and community outreach programmes proposed under BAIF-ICEF project. The common land was located at the upstream of the village, 15% of which comprised of sloping land, which had resulted in substantial soil erosion over the years. In view of this, the interventions planned had a focus on soil and water conservation to restore soil moisture and to develop a green cover with suitable mix of grasses and tree species which could meet feed and fodder requirements of the village cattle and small ruminants.

**Community Mobilisation:** Several measures were taken to motivate communities for taking responsibilities of implementing and managing various project components. Exposure visits to BAIF project areas in Rajasthan and Gujarat were organised to facilitate interactions with villagers where community participation had helped to convert barren, undulating wasteland into green pastures. While, such cross-visits proved beneficial largely for building on the confidence of the communities, a degree of cynicism remained. One of the reasons for this was the bitter experience of community lift irrigation scheme in the village which was non-functional because of mismanagement.

**Organizing Gram Sabha for Consensus:** The *Gram Sabha* meeting called by the project team in June 1997 to discuss issues regarding common land development received a good response from the villagers. Women's voice in the meeting prevailed over the reluctance of men, as they were going to be the major beneficiaries of the regenerated common lands. They had a concern of inadequate milk for children at home due to unproductive livestock. Common land development would enable easy availability of fodder and fuel wood, it was therefore, proposed to develop 45 ha of village common land and the remaining land to be left for open grazing.

**Conflict Resolution:** In the initial stages, due to conflict of interests, the project encountered opposition from the group of villagers that had encroached on the grazing land. Instead of immediate confrontation, the project team proposed to go ahead with fodder development plans, as a mechanism for building confidence amongst all stakeholders.

The *Sarpanch* (Village Headman) supported the encroachers against the project which led to the project losing grip on the situation initially. However, the strategy of exerting pressure from Government officials and projecting the *Sarpanch* favourably before others brought good results. Although the solution was accepted by all, the fact remains that the conflict between the encroachers and the villagers may keep arising depending upon the balance of power in the village.

### **Area Demarcation & Conservation**

**Measures:** The boundaries were fixed to demarcate 45 hectares proposed to be restored and a stone wall of 2,565 running meters was constructed, in order to demarcate this forest land from the neighbouring Bhilwara district. While making the enclosure, area nearer to the villages was proposed for open grazing to enable easy access. 12,000 meters of contour trenches, 112 gully plugs and over 15,000 pits were dug for tree plantation. In the enclosure work village women have contributed 80% to 90% of the labour (BAIF, 2003). Details of work undertaken in the common land are presented in Table 1.

Table 1: Treatment Measures on the CPR	
Stone Fencing	2,565 m
Continuous Contour Trenches	12,008 m
Stone Bunding	5,176 m
Gully Plugs	112 Nos
Pit Digging for Plantation	15,315 Nos
Drainage System	52.5 m

**Participatory Norms Development:** Before initiating activities, discussions on cost implications of the proposed work to be completed through project support, was held. Unanimously it was decided that 10% of the labour costs would be contributed as '*shramdan*' (voluntary labour) for generating a corpus to meet future maintenance costs. This fund would be administered by the CPMC.

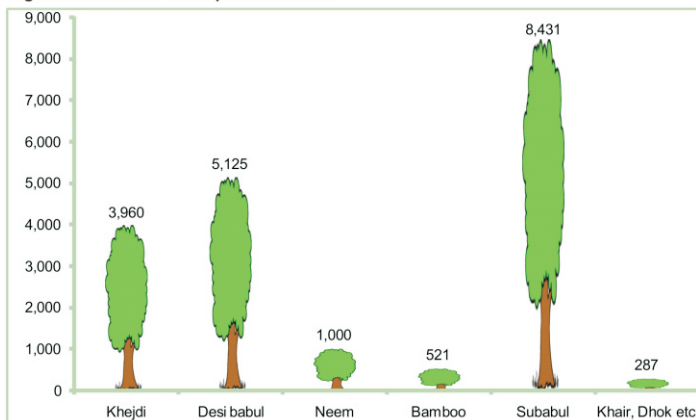
The Project team agreed to the rates decided by the villagers. Initially labourers involved in the work were apprehensive on payment of wages only after six months as was the case with other projects in the forest area. They also objected to the involvement of the village *Panchayat* in the disbursal of wages. To reassure the labourers the project team decided to pay wages every 15 days. The payment process was completely transparent which instilled confidence in the system. As a result more and more villagers began to take part in the work and showed a gradually increasing level of interest and motivation.

**Reorganisation of the Committee:** As work progressed, the need to reorganise the Pasture Management Committee was felt in order to ensure adequate representation from the community. The re-elected Committee comprises of twelve members - with two representatives from every hamlet with elected ward *Panch* being the President and the Secretary of the *Panchayat* being the Secretary of the Committee too, in charge of maintaining all the records.

**Tree Plantation:** Since the area was protected it was ideal to develop plantations with multipurpose plant species. Fast growing Subabul (*Leucaena lucocephala*) plantation was done along the fencing wall. Other species such as Khejdi (*Prosopis*

*cineraria*), Shirish (*Dalbergia sisoo*), Bamboo (*Dendrocalamus strictus*), Dhok (*Anogisus pendula*), Khair (*Acacia catechu*) were also included in the plantation. In the matrix ranking exercise done with the villagers species with multipurpose uses were preferred. Tree species like *Desi Babul* (*Acacia nilotica*), Ber (*Zizypus mauritiana*) already existed in the common land before the work was initiated. A total of little over 19,000 saplings were planted out in the area (Figure 5), leading to temporary employment generation through plantation activity.

Figure 5: Details of Tree Species Planted



**Promotion of Improved Varieties of Grass Species:** In order to improve grass cover 600 kgs of Dhaman (*Cenchrus ciliaris*) grass seeds mixed with clay pellets to avoid being eaten by birds and swept away with runoff water or wind were broadcasted. *Stylosanthus hamata* (stylo grass) was also introduced. These leguminous grasses also helped in improving the soil fertility.

Fodder was obtained from the enclosed area, after natural seed dispersal has happened, through cut and carry method around October to December. By this time of the year most of the agricultural operations are over and labour is available for harvesting.

Table 2 presents feeding calendar for the animals based on the feed resource available. Grazing the animals for 4 to 6 hrs on the CPRs and empty agricultural fields in post harvest period is a common practice. Stored crop residues and the grass from CPR are fed during winter (October to February) and summer (March to June) when there is scarcity of fodder in the fields. The storage period for grasses is about 40 days.

Table 2: Feeding Calendar			
Feed Resource	Seasons		
	Monsoon	Winter	Summer
Stored Crop Residue	++	+++	+++++
Grazing on cultivable fields post harvest		++++	+
Grazing on CPRS (waste lands, road side, field bunds)	+++++	++++	+++
+ Least			
+++++ Maximum			

Initial observations indicated that the grass yields increased substantially during the first two years. Yield per ha was to the tune of 0.5 tons with overall production of 22 tons from 45 ha area. Soil fertility improvement and conservation measures taken during the period were instrumental in improving the quality and quantity of grass.

***Benefit Sharing Arrangements:*** Since animals were not allowed in the commons for open grazing it was the task of the Committee to decide mechanisms for grass harvest and its equitable distribution. Important participatory decisions taken were as under:

- ✳ Any one from the village was allowed to cut as much grass as he or she wanted during the one month cutting season in October. Half the grass cut would go to the Committee who would sell it in the market. The other half could be taken home to feed animals.
- ✳ Period for grass harvest was announced in the village and grass harvest was done in the presence of Committee members and the watchman. During Committee auctions for sale of grass preference for purchase was given to Gudha Gokulpura villagers.
- ✳ The revenue generated is then directed towards payment of *choukidar* (watchman) salaries and used for repairs and maintenance work in the commons.

## 6. Impact & Replication

### 6.1 Secondary Impact of Watershed Measures

The core project area constituted of nine micro-watersheds. Soil and water conservation work was implemented over the entire watershed area which included individual land holdings and village commons spread over 75 ha (of which 45 ha was handed over to BAIF for development). With the undulating topography and hydro-geological conditions of the area the conservation measures undertaken led to improved soil moisture and crop yields. The impact achieved is a result of the integrated approach to area development. Interventions for development of village commons has led to positive impacts on improving soil moisture, water availability, feed resources, milk production and crop outputs.

### 6.2 Controlled Soil Erosion

Within the area surrounded by the stone fence and as a result of construction of contour trenches (12,008 meter), stone bunding (5,176 meter), gully plugs (112) and pits (15,315) soil erosion controlled was to the tune of 19-21 tons per ha. Soil conservation and moisture availability together supported good tree growth and improved biomass availability from the common land.

### 6.3 Improved Water Availability

With the annual rainfall of 450 - 750 mm and 12,008 running meter Continuous Contour Trenches (CCTs) the water conservation achieved from 45 ha common land area is 2 million litres per year. In addition, as a result of the treatment measures covering the entire project area and in the common land, which is placed at the higher reach, there was significant increase in the overall availability of water for irrigation and drinking. Rainwater harvesting could improve subsoil water table by 1.5 - 2.0 m. This was evident from the well water available for irrigation. Of the 227 wells in the watershed area, 175 had water availability for 9 - 12 months in a year as against 88 wells before initiating work in the area. Initially traditional *chadas* (water lifting device made out of leather) were used to lift water from wells for irrigation, but now with adequate water, diesel pumps have replaced all the traditional *chadas* as water lifting device. There are 41 diesel engine pump sets as against 8 during 1997. Well monitoring exercises reflected an improvement of more than 300% in the time taken to recharge from 12 - 36 hrs in 1997 to 2 to 12 hrs in 2002 (BAIF, 2003).

### 6.4 Improved Grass and Seed Production

Improvement in soil moisture regime and cultivation of grasses such as Dhaman and Stylo has helped in improving fodder biomass availability. Almost all farmers in the village benefitted from this activity in the year 2000. Fodder production increased from close to 2 quintals/ha in 1987 to a little over 6 quintals / ha by the



year 2000 (Table 3). The excess grass was sold to the buyers from neighbouring villages. A big incentive was the price as, while the market rate for fodder was Rs. 2/- a bundle the CPMC sold the same at half the cost.

It was observed that Dhaman seed collection offered good opportunity for earning wages @ Rs 10/- per kg. With one person collecting 5 kg seeds / day the earning were Rs 50 /per day. In grass harvesting a person can

**Table 3: Details of Grass & seed Production**

Particulars	Production in quintals / ha in 2000	Families benefitted
Dhaman Seed	0.15	65
Dhaman Grass ( <i>Cenchrus ciliaris</i> )	5.11	170
Local Sheen Grass	1.0	85
<i>Buari</i> * Grass	0.90	205
* <i>Buari</i> Grass was used for Broom making		

**Table 4: Economic Returns during the Period 1998-99 to 2002-03**

Particulars	Amount (Rs)
1. Total Expenditure	331,965
2. Income:	
a. Surplus Grass Sale	125,599
b. Tree Loppings	72,958
c. Other Income (from sale of grass, wood, seed, grazing charges & encroachment fine) (See also Annexure 1)	151,697
Total Income 2 (a+b+c)	350,254
Total Surplus (2(a+b+c))-1	18,289

harvest 100 bundles (100 kg) per day and earning wages of Rs 50/- per day. *Buari* grass (broom grass) weighs 5 kg per bundle and each bundle is sold at Rs 10/-. This grass is used by landless families for broom making. Such economic opportunities assisted the CPMC in generating a modest surplus in the initial years itself (Table 4). For more details refer Annexure 1.

## 6.5 Fodder Promotion on Private Land

By observing the experience of

grass production from commons, villagers got motivated to convert their marginally productive land areas to private grasslands and for plantations of multipurpose tree species. Around 70 HHs have established over 33,000 saplings of 22 assorted species on private marginally productive land with 62 % survival rate (Ghorpade, A and Naik, S, 2002).

## 6.6 Improved Tree Biomass

A vegetation study was undertaken with technical assistance from Foundation for Ecological Security to assess the qualitative and quantitative growth of foliage on the regenerated commons. Salient findings of the study are as follows:

- ☞ No. of trees per ha has increased from 41 to 187 trees,

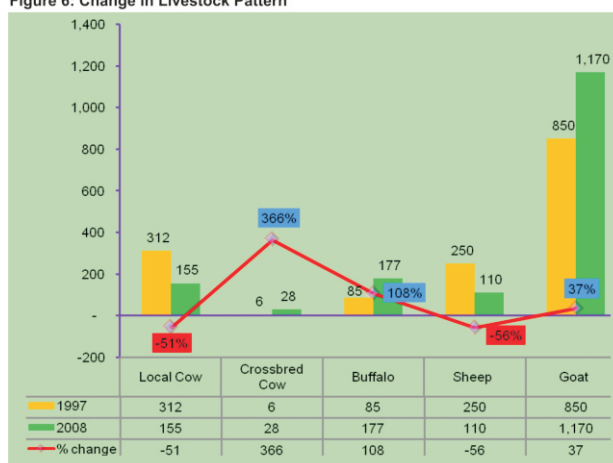
- Grasses on regenerated patches shows a greater diversity and higher palatability,
- Total palatable biomass including grasses is about 69% more over its availability at the baseline,
- Total value of biomass from commons available to livestock keepers is estimated to have increased to Rs 10,700 per household.

The details of this analysis are provided in Annexure 2.

## 6.7 Changes in Livestock Trend and Milk Production

The population of local breed of cattle reduced considerably, the number of cross bred animals increased (Figure 6). Fodder availability from silvipasture and increased fodder cultivation on private land has made a difference in milk production. The crossbred cow's milk yield increased seven times more as compared to the local cow and the graded buffalo's milk was four times more. For the first time in the area a crossbred cow was sold for a price of Rs 12,000. Increase in milk production was from 2.5 to 8 litres per day per animal. At present, the milk production in the village is 1,960 litres per day @ Rs 15 per litre earning a total revenue of Rs 29,400. The earnings per household having livestock is approximately Rs 163 per day from sale of milk (Ghorpade, A and Naik, S, 2002).

Figure 6: Change in Livestock Pattern

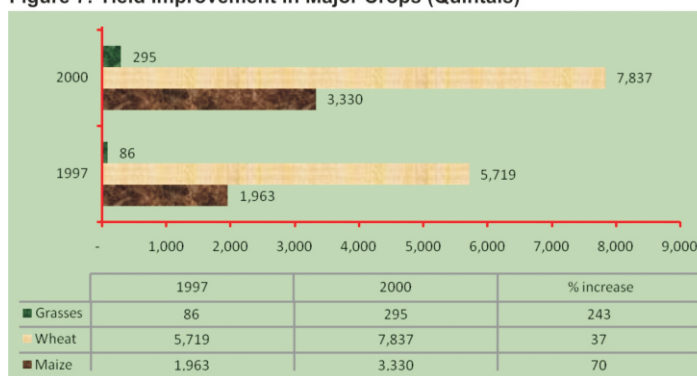


In the case of small ruminants ten households were engaged in rearing goats of Sirohi breed. There was an increase of 37% in the goat population. With regard to changes in livestock population, the overall trend shows a marked increase in number of buffaloes and crossbred cows followed by goats, and a reduction in the population of non-descript cows, bulls and sheep.

## 6.8 Improved Cropped Area and Productivity

The area under cropped land increased in *Kharif* and *Rabi* season @ 47% and 44% respectively. There was also an increase in the cropped area during summer season from 7.88 to 12.36 ha. Area under irrigation also increased by 88% in *Kharif* and *Rabi* and so also the yield of major crops like maize and wheat by 70% and 37% respectively (Figure 7) (BAIF, 2003).

Figure 7: Yield Improvement in Major Crops (Quintals)



## 6.9 Corpus Generation

At the end of the financial year 2007-08 the CPMC had generated a corpus of little over Rs 32,000.

## 6.10 Ecological / Environment Benefits

Measures taken to combat soil erosion, such as bunding, gully plugging and establishing green cover on the land has greatly restored the natural vegetative cover in the area. This has helped in protecting natural flora and fauna and many wild animals and birds are seen in the area. There is an overall impact on creating a microclimate and a breeding ground for reptiles. Among the mammals and reptiles blue bulls, rabbits, rats, snakes and frogs are seen in the area.

## 6.11 Empowerment of Women

Women coming together to talk about money matters was completely unheard of in the community. Over the period, about 400 women have organised themselves into 13 SHGs. Ongoing training inputs provided by the field team on management issues have led to an increase in their confidence and decision making capabilities. Exposure to economic opportunities such as sale of seed material and new crops like turmeric, availability of *buari* grass for broom making has helped few members to earn supplementary incomes.

## 6.12. Qualitative Indicators

Qualitative impact on poor livestock holders and households can be seen as:

- ✧ The community now has access to significant increase in the quality and quantity of fodder and tree biomass on a sustainable basis.
- ✧ Conflicts arising due to a resource crunch scenario have reduced because of improvements in the quality of common lands. Poor and neglected segments of the community now have equal right to natural resources which earlier was under the command of economically well off households.
- ✧ Drought proofing is achieved with minimising risk of uncertainty of feed resources enabling livestock owners to venture in livestock development. Increased water regime, crop productivity and food security has helped to fight against recurrent drought situations.
- ✧ Participatory decision making processes have helped in providing a voice to all castes and segments of the village.

- ✧ Reduction in drudgery for women by reducing time spent on fodder and fuel wood collection. Women have been the major beneficiaries of the regenerated common land. Now they get adequate fodder for their livestock within easy reach which saves their time in fodder and fuel-wood collection from 4-5 hrs (baseline) to 1-1.5 hrs at present.
- ✧ Improved capabilities of the community members towards enforcing rules to maintain and manage the commons.

### **Replication**

Based on the success of this pilot initiative, Government of India, provided financial support under SGSY special project to replicate this programme in 76 villages spread over 2,520 ha area. BAIF has initiated development of 320 ha of community land spread over 9 villages in Bhilwara district of Rajasthan.

The Panchayat of village Mediya which falls in the neighbouring district of Bhilwara unanimously decided to hand over 37 ha out of 50 ha of common land owned by it for silvipasture development by BAIF.

## 7. Lessons Learnt

- ✳ Confidence building, facilitation and negotiating skills of a facilitating organisation has helped in resolving conflicts and arriving at consensus which is very crucial for success and sustainability of CPR management. While developing commons the likely impact on various stakeholders should be assessed. In this way possible conflicts can be solved by facilitating negotiations between groups before initiating the work. In the project area, in view of the conflicts within the group of farmers, the decision to precede with fodder development plan on 45 ha area was an opportunity to get started and convince the villagers with early results of the interventions, without upsetting social relations in the village. Process documentation could help in analysing potential conflict situations and finding suitable solutions.
- ✳ A clear understanding regarding the exact roles and the functions of the CPMC and the *Gram Panchayat* can foster a cordial environment based on cooperation and mutual trust.
- ✳ Regular training and orientation of the village *Panchayat* and CPMC members has empowered them to play a pivotal role in the management of development funds and assets developed. There is a need to educate not only the *Panchayat* members but also the *Gram Sabha* on the responsibilities and powers of the *Panchayat*.
- ✳ Empowering the community and nurturing able leadership can help in constructive decision making for equitable sharing of the benefits and shielding from unwanted elements. The norms of benefit sharing should be decided with participation of community members and Gram Panchayat. The established local political leadership is a major factor that could influence better long term benefits of the project in general and the village common in particular.
- ✳ Protection of commons can lead to not only increasing the output of grasses and, thereby, promoting livestock development, but the renewal of hydrology, due to introduction of appropriate technologies, can lead to positive impacts on food security.
- ✳ Re-sowing of grass seeds after a period of five years was beneficial to maintain grass cover and availability. The soils, being marginal, need application of fertilisers supplying major nutrients like nitrogen and potash to maintain the fertility and improve grass production.

## 8. Post Project Monitoring

### 9.1 Initial Efforts and Withdrawal Strategy

Planning and designing of the work was done by BAIF ICEF project team and field implementation was done through field functionaries along with field guides and community representatives. No hired labour was brought from outside the village. During implementation, training was a major ongoing activity. Knowledge and skill transfer in technical areas such as soil and water conservation measures, routine maintenance and upkeep of the assets created and maintenance of accounts at the group level were provided on a regular basis to ensure future sustainability.

Youth with good knowledge about local community dynamics and inclination to work for the village were selected and trained as field guides. They served as a link between BAIF field team and the villagers and also provided a degree of continuity after the exit of the facilitating team. Regular orientation, training and coaching provided by BAIF field teams enabled them to work effectively. Management responsibilities were handed over to the Committee members, two years prior to the withdrawal of the BAIF team. Till the time BAIF was involved closely due care was taken to ensure participatory decision making and representation for women and marginal landholders.

### 9.2 Role of BAIF

Creating a formal body in the form of a local Committee and set in place rules and regulations of governance was the role played by BAIF in the initial years. The Committee members were not experienced and completely new to the complexities of protecting the pasture plot. BAIF had to assist and coach the committee on matters related to effective functioning of the committee. Over the period, the entire experience helped the Committee gain confidence and role of BAIF changed from being directly involved in the overall facilitation and implementation of the work to that of an advisor when required. The village *Panchayat* has taken interest in managing common land with its representation as a member. The Committee is now well equipped to work independently. However, with the consensus of the Committee BAIF has continued to be a member.

### 9.3 Present role of the CPMC

Since 2004 the village *Panchayat* is managing the commons in collaboration with the CPMC. Women continue to play an active role in its functioning and one of them was unanimously selected to work as an office bearer (President) of the committee for one year.

*Panchayat* is actively engaged in securing funds for the upkeep of the protected silvipasture area by dovetailing with other ongoing Government programs. During the year 2006, the *Panchayat* had invested Rs. 2.5 lakhs for minor repairs and had also some new plantation. Again during 2008-09, development activities were undertaken through funds (Rs 10 lakhs received under National Rural Employment Guarantee scheme (NREGA)).



## 9. Conclusion

This note on the experiences of the community of Gudha Gokulpura, yet again, clearly highlights the strength of collective action in conservation of common pastures and the positive impacts on livestock rearing and other natural resource based livelihoods. Developing a coalition of interests between the *Panchayati Raj* institutions and community based organisations ensures stability and economic sustainability in maintaining the assets created. Lastly, it also highlights the need to factor in and build necessary elements of appropriate exit policy by the facilitating organisation into the project formulation methodology for assisting in a smooth transition of power by building upon the capacities of the primary stakeholders

## Annexure 1: Economics of the CPR for the 5 Year Period Based on Direct Benefits

Particulars	1998-99	1999-00	2000-01	2001-02	2002-03	Total (Rs)
Expenditure (Rs) Silvipasture developed (ha) @ Rs 7,377 per ha for providing enclosure, treatment measures, forage seeds and watch & ward	77,109	250,604	4,252	-	-	331,965
Dry Fodder (tonnes)	22.8	24.6	26.2	19.7	14.3	107.6
Income (Rs) Grass Sale	22,800	24,600	39,300	24,587	14,312	125,599
Dhaman Seed Sale	-	7,800	11,610	14,750	18,360	52,520
<i>Buari</i> Grass Sale	-	5,500	7,800	47,150	36,800	97,250
Sale of Tree Loppings	-	-	21,343	23,715	27,900	72,958
Other Income	560	540	360	135	332	1,927
<b>Total Income</b>	<b>23,360</b>	<b>25,160</b>	<b>88,413</b>	<b>110,337</b>	<b>97,704</b>	<b>350,254</b>

## Annexure 2

### Category wise Plant Density & Grass Cover

Particulars	Protected Commons	Un-protected Commons
Trees with diameter above 10 cm	170	29
Trees with diameter less than 10 cm	320	286
Shrubs	440	571
Grass Cover	69%	79%

### Palatable Fodder from Regenerated and Other Commons

Particulars	Protected Commons	State (Rajasthan) Average
I. Palatable Biomass from Regenerated Commons:		
☆Trees Leaves (tonnes / ha) {calculated at 5% of the total standing biomass}	0.28	1.5
☆Shrub Leaves (tonnes / ha) {calculated during lean period of grass production}	0.03	0.3
☆Grass / Herbs (tonnes / ha)	0.42	1.6
☆Total Palatable Biomass (tonnes / ha)	0.73	3.4
II. Total Palatable Biomass from other common lands (tonnes / ha)	0.433	1.0
III. % increase in availability of palatable biomass per ha from regenerated patches in comparison to adjoining / unprotected plots	68.6	463.2

### Dry Matter Available from Commons and Crop Residue

Particulars	Protected Commons	State (Rajasthan) Average
Total Commons in ha	610	326
Average Gross Sown Area in ha	336	209
Dry Matter from Commons (tonnes)	316	1,514
Dry Matter from Crop Residues (tonnes)	1,011	466

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## Abbreviations

BAIF	BAIF Development Research Foundation
BPL	Below Poverty Line
CBC	Cattle Breeding Centre
CCT	Continuous Contour Trenches
CPMC	Community Pasture Management Committee
CPR	Common Property Resources
DPIP	District Poverty Initiative Programme
ICEF	India Canada Environment Facility
NGO	Non-Government Organisation
OBC	Other Backward Classes
PRI	<i>Panchayati Raj</i> Institution
RRA	Rapid Rural Appraisal
RRIDMA	Rajasthan Rural Institute for Development Management
SC	Scheduled Caste
SGSY	Swarnajayanti Gram Swarojgar Yojana
ST	Scheduled Tribe

## Glossary

<i>Meena</i>	Tribal group widespread in south Rajasthan and adjacent areas
<i>Kharif</i>	The <i>Kharif</i> crop is the autumn harvest (also known as the summer or monsoon crop) in India and Pakistan. <i>Kharif</i> crops are usually sown with the beginning of the first rains in July, during the south-west monsoon season. The term <i>Kharif</i> means "autumn" in Arabic.
Khejdi ( <i>Prosopis cineraria</i> )	A fast growing fodder tree seen in arid climate areas. Helps in atmospheric nitrogen fixation
<i>Rabi</i>	The <i>Rabi</i> crop is the spring harvest (also known as the "winter crop") in India and Pakistan. The term <i>Rabi</i> means "spring" in Arabic, which usually spans mid/late April to mid/late June when the crop is harvested.
Dhaman ( <i>Cenchrus ciliaris</i> )	A perennial fast growing fodder crop that grows well in shallow soils The fodder and seeds are sources of income to farmers.
Subabul ( <i>Lucaena leucocephala</i> )	Fast growing exotic multipurpose tree species.
<i>Gram Panchayat</i>	Elected Village Council
<i>Gram Sabha</i>	Village Assembly
Gully pluggings	A <i>bund</i> constructed on a hill from locally available material to conserve moisture for trees.
Rainfed Agriculture	Agriculture, which is mainly dependent on rainfall.
<i>Sarpanch</i>	Elected leader of the <i>Panchayat</i>
Stylo ( <i>Stylosanthus hamata</i> )	A perennial fast growing leguminous grass. Grows on medium to light soils. It is used for vegetative compaction on field bunds and slopes to prevent soil erosion.
<i>Taluka</i>	<i>Tehsil</i> / Block
Collector	Government Representative responsible for administration in a District.
<i>Choukidar</i>	Watchman
<i>Charagaha</i>	Common grazing grounds
<i>Chadas</i>	A traditional device made out of leather for lifting water from wells with the help of bullock.
Desi babul ( <i>Acacia nilotica</i> )	A native evergreen fast growing tree The tree grows straight with broom shaped branches. Grows well in black cotton and heavy soils It provides good quality fuel wood. The fruits and bark have medicinal value.
Khair ( <i>Acacia catechu</i> )	A native tree species having medicinal value. Wood extract used for tanning and dyeing. <i>Katha</i> is obtained from Khair wood and is used extensively in making <i>Paan</i> (betel leaf)
Dhok( <i>Anogisus pendula</i> )	Also called Dhokda. A drought tolerant tree suitable for plantation with grasses in silvipasture.

The NDDB-FAO **South Asia Pro-Poor Livestock Policy Programme** (SA-PPLPP) SA PPLPP is a unique livestock development program that aims to 'to ensure that the interests of poor livestock keepers are reflected in national as well as international policies and programs affecting their livelihoods'. It endeavors to do so by a) creating spaces for and facilitating dialogue among the actors playing a direct and indirect role in the livestock sector of South Asia, and b) drawing from and using lessons from field experiences to influence livestock-related policies, programmatic and institutional changes towards the benefit of poor female/male livestock keepers in the region.

*To access SA PPLPP publications and other information resources, please visit our website at <http://www.sapplpp.org>*

**BAIF Development Research Foundation's** mission is to create opportunities of gainful self-employment for rural families, especially disadvantaged sections, ensuring sustainable livelihood, enriched environment, improved quality of life and good human values. This is being achieved through development research, effective use of local resources, extension of appropriate technologies and upgradation of skills and capabilities with community participation. BAIF is a non-political, secular and professionally managed organisation. Various programmes are implemented by BAIF and its Associate Organisations in more than 47,000 villages in Maharashtra, Karnataka, Andhra Pradesh, Uttar Pradesh, Uttarakhand, Bihar, Gujarat, Rajasthan, Madhya Pradesh, West Bengal, Orissa and Jharkhand.

*For more information on BAIF, kindly visit their website at <http://www.baif.org.in/>*

**Rajasthan Rural Institute of Development Management** (RRIDMA) is an associate organisation of BAIF established in 1993 under the Societies Registration Act, 1950. The head office is located at Bhilwara. The divisional offices are located in Udaipur and Bundi.

RRIDMA is implementing the multi-disciplinary programme covering Livestock Development, Community Pasture Development, Tribal Development, Water and Energy Conservation Project, Transfer of Technologies for Sustainable Development Project, and Women Health and Empowerment.



## About this Good Practice

This good practice note based on the experiences of BAIF Development Research Foundation (BAIF), shows the importance of restoring common property resources by involving the communities directly, as a way forward for impacting positively on their quality of life.

This good practice shows how “Protection of Commons” has led to not only increasing the output of grasses and thereby promoting livestock development, but the renewal of hydrology has led to significant increases in acreage as well as production of various crops. This has resulted in enhancement of food security amongst the small farmers.

## SOUTH ASIA Pro Poor Livestock Policy Programme

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