ENCLOSING FORESTS

Towards Protection of Habitat

Case Studies from Rajasthan

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August 2008

The project 'Social Mobilisation around Natural Resources Management for Poverty Alleviation' was launched in December 2003 by the Ministry of Rural Development (MoRD), Government of India and the United Nations Development Programme (UNDP). Supporting the Government of India's commitment to expand self employment opportunities for the poor, the project specifically targeted poor women and marginalised communities and was implemented through 17 NGO partners in 11 districts across three states - Jharkhand, Orissa, and Rajasthan.

This study analyses the approach of 'enclosing forests' implemented under the Project in Rajasthan which aimed at protecting and regenerating forests and securing long-term access of and benefits to local communities. Forest enclosures established in 13 villages of Udaipur and Baran districts and covering 1289 hectares of forest land represent a collaboration between local communities, the Forest Department and partner NGOs - Foundation for Ecological Security and Sankalp Sanstha. Through an in-depth study of forest enclosures in four villages and interaction with communities and key stakeholders, this study presents the strengths as well as weaknesses of this approach and offers valuable lessons for replication and policy.

The study has been carried out by Rucha Ghate, Deepshikha Mehra and Mukund Kulkarni at SHODH: The Institute for Research and Development, an organization established in 1997 to undertake studies on various socio-economic aspects of rural and tribal people, and the environment. Mr. Prasanta Pradhan, Co-ordinator, GoI-UNDP Project, has facilitated and provided back-up support for the study. Ms. Judith Smith, Independent Consultant, has provided editorial support and coordinated print production.

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1. Decentralization Initiatives in Forest Management

The implementation of the 'Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006' (henceforth referred to as the Act) from January 1, 2008 is the most recent step in the decentralization of forest management. It is an initiative that helps recognize and re-establish the forest dwellers' symbiotic relationship with the forest. Under the Act, the communities have rights of ownership, and access to collect, use and dispose off minor forest produce. The Act also grants rights, to communities, over forestland occupied before 13th December 2005. The *Gram Sabha*[1] is now empowered to regulate access to community forest resources, since it is the community that owns forests within traditional boundaries (not restricted to revenues boundaries). The *Gram Sabha* now has the responsibility of determining the nature and extent of individual or community forest rights by passing a resolution and forwarding a copy to the Sub-Divisional level committee[2].

These steps are significant as 'roughly 275 million poor rural people in India—27 percent of the total population— depend on forests for at least part of their subsistence and cash livelihoods, which they earn from fuel wood, fodder, poles, and a range of non timber forest products, such as fruits, flowers, and medicinal plants (Source: World Bank Report, 2006).

It is feared that with such extensive rights being bestowed on tribal and other forest dwelling communities, Joint Forest Management (JFM) may lose its sheen. This system envisages the involvement of local communities in the management of state-owned forests under partnership arrangements with the state Forest Department. Permission to use minor forest products for sustenance in exchange for protecting the forest has been a major attraction of JFM. If this privilege is now a right, and the communities have the responsibility of managing their own forests, then the role of the forest department could be drastically reduced. On the other hand, the department could still have the important role of facilitator and provide expertise in scientific management. At present, there is ambiguity on the role of the forest department and the status of JFM. However, there is certainty that, under the Act, communities will have greater autonomy and responsibility with reference to the sustainable use of resources. JFM would have contributed to the communities' capacity to take this up.

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[1] A village assembly which consists of all adult members of a village.
[2] The Sub-Divisional level Committee comprises forest, revenue and tribal officers.

2. The Role of NGOs in Joint Forest Management

The JFM programme started in response to suggestions from donor agencies as well as in recognition of the failure of the past approach of state agencies (Thompson 1995, Matta 2006). Although the programme kindled a lot of hope, it faced scepticism in the initial years. While Poffenberger *et al.* (1998: 13) had enthusiastically expressed that JFM has brought in "reversal of the alienation of forest people's rights, of institutional conflict, and of ecological patterns of forest degradation," and that "India's grassroots experience of ethno forestry can be replicated across regions and nation-states, provided communities are allowed to regain management authority over the integral resources that sustain their livelihoods," other studies indicated that JFM would suffer because, in many instances, both the partners – the Forest Department and the communities – were not ready for the new institutional arrangement (Rishi 2006). The staff of the Forest Department, with a long history of 'command and control', were not adaptive enough to the change in approach and the communities would find it difficult to reconcile to the idea of being equal partners in managing a resource from which they were strictly kept away for so many years and the use of which invited punishment (Sarin 1996 [1998]). In this scenario, NGO's were envisaged to play an important role. The state too recognized this positive role by making it mandatory to involve an NGO representative in the JFM committee (via. the GoI circular no. 6.21/89-FP-dt.1.6.1990).

NGOs, as facilitators, have played a crucial role in bridging the credibility gap as well as in providing assistance on the non-technical and social aspects of participatory forestry (Varalakshmi and Kaul 1999). Despite their own limitations and constraints, NGOs have shown potential in practically every aspect of common property resource management and in making decentralized forest management a reality through successful negotiation and co-management between people and governments (Isager *et al.* 2002).

With the provisions under the Act, NGOs will have an important role to play in community forest management – in building community stakes, rebuilding institutional mechanisms, promoting the bottom-up approach in natural resource management, and in facilitating the devolution process in general (Jodha 2002).

NGOs are increasingly involved in micro-plan preparation at the village level and in monitoring and project evaluation. It is now well-established that in the case of the NGO-promoted collective action, rapport building, awareness-building, sharing of information, introducing it to modern values like gender equality, developing skills for decision making etc. have become easier (Ghate 2008). There is evidence to indicate that communities that have been supported by NGOs have fared better in forest protection (Ghate and Nagendra 2005).

3. 'Enclosures' for Forest Protection

Enclosing of forests[3] and common lands has been practised from the pre-colonial era to the colonial and post-colonial period. While areas sheltered by village communities were protected by physical fencing and through social sanctions, the State mostly protected 'its' resource through strict policing measures. In the pre-colonial era there were 'independent village republics', that regulated the use and preservation of natural resources like forests through decentralized community control systems (Krishnan 2000, Balooni 2002, Singh 2001). In early Sanskrit text a clear distinction between common and uncommon land existed and this meant determining and preserving boundaries around these areas and setting enclosures (Bûhler, 1886 as cited in Robbins 1998). In other parts of India too there are records that explicitly explain that extraction from village common lands was governed by a variety of regulations, mainly quotas on the amount that could be harvested by each family and in different seasons (Gadgil and Iyer 1989, Guha 1989 as cited by Gadgil and Guha 1992).

In addition to community areas, there were areas enclosed by rulers. During the time of the Mauryan rule, special forest areas were reserved for the 'game' of the emperors and tribals or hunter-gather tribes were deliberately isolated from this. The state took larger control of hunting reserves and wildlife forests, while peasants controlled fields and forests, and village communities controlled pastures (Gadgil and Guha 1992).

Village level institutions continued to have great control over and access to natural resources until the end of the 18th century (Prasad 2003). In the colonial era, 'fencing' large tracts of the forest for commercial use was introduced at a larger scale. The formal forms of categorization of forest enclosures were reserve, protected, and village forests. These areas were clearly demarcated and the rights of local communities to reserve forests were completely removed. These restrictions were so strict that " felling, girdling, lopping, tapping, and burning trees, even stripping the bark of the trees and the collection of leaves was prohibited" (Rangarajan 1996). In the post-colonial period, 'fencing' of the forest from local communities continued until the late 1980's when the participatory Joint Forest Management policy was formulated. It is then that collaborative forest-governing institutions were established at the local level.

Today, a range of forest protection measures and techniques, which are both physical and non-physical in nature exist. Institutions are non-physical arrangements that represent ideas about right and wrong and appropriate and inappropriate public behaviour (Krishna 2001), and thus establish social fencing. Rules become important in this arrangement as they allocate costs and benefits to people involved in forest protection and can overcome free-riding and opportunistic behaviour, by imposing sanctions/penalties that can range from traditional social sanctions to formal structures.

A review of Indian experiences concerning local forest management shows that effective community groups still, among other things, have the presence of indigenous resource management institutions

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[3] An 'enclosure' is a simple method of cordoning off specific area of forestland by building stonewalls on borders.

and traditional socio-religious forest values (Sarin 1996 [1998], Gadgil and Berkes 1991, Gadgil and Subhashchandra 1992, Roy Burman 1985, 2003). Many of these communities have not only managed to maintain their traditional norms and practices but have also blended them with modern practices and institutions to achieve best returns for the community (Mehra 2008, Krishna 2001). Thus, traditional institutions can either stand-alone or overlap with modern institutions which can be NGO-promoted, state-promoted, or self-initiated.

Rules and norms of forest use and governance are supported by physical monitoring and protection of the resource either through regular guarding of the resource and/or by physically enclosing it with a fence. Well-defined boundaries of the resource can lead to excludability and is recognized as an important factor that can lead to effective protection of the resource through better collective action in addition to factors like proximity to the resource and high resource dependence (Pundolfelli *et. al* 2007).

In present times, different ways of protecting a piece of forestland exist through out India. While, the setting up of voluntary patrolling teams is a popular method used by communities, the forest department assigns this job to the forest beat guard. A popular method to protect the forestland in Rajasthan is to build enclosures that can be physically demarcated either by cattle proof trenches, stonewalls, barbed wires, or bio-fences. Funds for this are provided either from the community projects or by the forest department.

4. Enclosures in Baran and Udaipur Districts

Under the GOI-UNDP project "Social Mobilization around Natural Resources Management for Poverty Alleviation" (2003-2007), forest enclosures were established in 13 villages of Udaipur and Baran districts involving and covering 1289 hectares of forest land. The enclosures represent a collaboration between local communities, the Forest Department and partner NGOs - Foundation for Ecological Security and Sankalp Sanstha.

The NGO partners in Baran and in Udaipur districts accepted local communities' suggestion to fence the forest to be protected under JFM. Unlike some forest rich states in India, forests of Rajasthan are in a degraded state and enclosing a piece of land with fencing would assist the process of regeneration. Also, due to large scale migration, enclosing a forest area is considered safer because protection of the forest is difficult in the absence of the members of a community. Some community members, like those in Udaipur district, support the idea of enclosures as they feel that physical fencing could contribute to the regeneration of the species lost during a famine that occurred in 1986.

"We have had extensive discussions and many meetings with communities about the need for stone fencing and they have presented many reasons…in the past 20 to 25 years a lot of degradation has taken place, but the root-stock of many species still remains. Open-grazing will cause a lot of harm and stone fencing will give nature a chance to regenerate." (Sankalp)

As part of this study, three villages (Sodhana, Madikachar, and Hatrikheda) were visited in Baran district and one in Udaipur district (Chitrawas/Kyara ka khet). In these four villages, 306 households in partnership with the forest department and partner NGOs have established forest enclosures over 435 hectares of forest land (refer Table 1 for details).

In all these villages, enclosure walls are as high as 3-4 feet to ward off stray cattle, to remind the villagers that the area is closed for grazing and collection of other forest products and to provide protection to plantations undertaken under the JFM programme. NGO representatives accept that stone fences are required because social fencing has proven to be ineffective. However they feel that with time stone fences will remain symbolic and the community will move towards social fencing.

"In a way social fencing has begun replacing physical fencing. The villagers themselves have taken the decision to reduce the height of the fencing from 4 feet to 2 feet. Now it remains symbolic."
(Sankalp)

The natural regeneration of grass, and the growth of especially planted fuel wood yielding species and fruit trees in all the enclosures have, in a majority of villages, yielded substantially increased supply of fodder for domestic cattle, and fuel wood for the local households. However, the communities are yet to explore further income generation opportunities like the sale of excess fodder, or the development of dairy.

Employment opportunities from enclosures
Photo credit: SHODH

5. Case Studies

Case Study – 1
Rejuvenation of Traditional Sustainable Harvesting Techniques
Hatrikheda village, Baran district

Background

Hatrikheda is a tribal village located in Shahbad block, Baran district. It is a small user group with only 16 households from the *Bhil* community. The enclosure in Hatrikheda was set up in 2005 after much struggle between the NGO, Sankalp, and the community on the one hand and the forest department on the other.

During the awareness building activities people of the village realized the importance of collective action for community development. Some of the village representatives were taken on exposure trips. One such exposure trip was to village Khedla where the system of enclosure had been initiated in Baran district with the help of Sankalp.

Hatrikheda has, for many years, been exposed to community development activities such as setting up of a school and building of a water tank. These activities encouraged the community to do more and this was when they moved towards forest protection and submitted an application in 2005 to the forest department to set up an enclosure. However this application was rejected. It is only through concerted efforts that application was approved and a Joint Forest Management Committee (JFMC) was set up on 16th May 2005. The forest department and the collector approved of an allotment of a 30 hectares of land area for the enclosure.

Challenges

The enclosure had been encroached upon when it was allotted and the community worked together to reclaim it. As Dhanji narrates, "The men and women, used to run after his [encroacher's] tractor". Registration and plantation activities followed soon after and the fence came up only in 2006 mainly with funds from the ongoing project and partly through the villagers' voluntary labour.

Participatory management

This patch of forest is very close to the village and thus easy to monitor. There is voluntary patrolling by the villagers - both men and women. In order to dissuade poachers, night patrolling is also taken up. Initially the community had to struggle to stop outsiders from entering the enclosure. Gradually, the community was able to convince them about the importance of forest protection.

The JFMC has 12 members with a sub-committee of women. The committees have prepared a working plan for the enclosure and have set up rules for the use of the forest. Villagers from Hatrikheda can collect fuel wood after seeking permission. No fresh wood can be cut. However, wood is made available after the thinning and pruning activities in the enclosure. The community also follows traditional sustainable rules. For example there are restrictions on the collection of *tendu* leaves as it destroys the fruit bearing activity of the plant. Although the community does not have a well-designed and modern penalty system for the offences committed, the traditional way of applying social sanctions is already in place.

Fruits of one's Labour

In recently undertaken plantation work, the community ensured the plantation of multiple species like bamboo, *awala, Moha* (Madhuca longifolia), and *Karonda*(Carissa carandas L.). The community members mentioned that the older trees in the enclosure have been regenerated due to the protection they enjoy. Now they are looking forward to enhancing the availability of fodder. The community has plans to sell the excess products, after fulfilling their own needs.

Breaching barriers of protection
Photo credit: SHODH

Case Study – 2
Reassertion of Traditional Rights
Madikachar village, Baran district

Background

Village Madikachar is a small village of Shahbad block, Baran district, with 17 *Seheriya* tribal households and one *Yadav* household that stays at a distance from the hamlet. In the government records, the village is known as Madesanbhasingha. Even though some development activities like the setting up of a school and the installation of a hand pump have taken place, the accessibility of the village, lack of electricity and the low education level remain a problem.

The *Seheriyas* settled on this land over forty years ago. However, in 2000 they were asked to leave this area as their settlement was on forestland and on 14th June 2004 all the families in Madikachar were sent a legal notice by the forest department. The *Seheriyas* did not relent and so legal cases were filed against them and on 24th February 2005 each family was fined Rs. 250.

Challenges

The disputed status of the settlement deprived the community of various development facilities. The villagers reacted by taking out protest rallies and registering their protest with the District Collector. They were also helped in their protests by an NGO, Sankalp. Responding positively to these appeals, the Collector assured the villagers in 2005 that they would not be displaced until they were provided with an alternative site.

With NGO intervention, the community's awareness regarding rights over and responsibilities towards their resources slowly began to develop. This brought in a sense of ownership and in 2005 a JFMC was set up and an area of 15 ha was enclosed. The enclosed area was chosen by the villagers due to its proximity to a river. Even though at that time the *Yadav* household had encroached upon this area, the villagers managed to get the encroachment removed with the help of the staff of the forest department.

Participatory management

At present the JFMC has 12 members and a sub-committee of seven women. In order to protect the enclosure, the community provides voluntarily labour. Two watchmen have been employed at a monthly salary of Rs. 600 each. This amount comes from the Development Fund set up by the villagers.

The JFMC has also formulated rules and regulations to use the enclosed forest that ban open grazing. Regeneration of fodder is the main incentive for the community. The community also ensures the sustainable use of fuel wood and timber from the forest. Awareness regarding the forest has also increased and the community has caught timber poachers from Madhya Pradesh on many occasions. The community has also entered into conflicts with nomads, the Revaris, from the same district, who come to graze large herds of sheep in monsoon. Even though these nomads are armed with grazing permits from the Forest Department, the villagers do not entertain them.

The community attributes its heightened sense of ownership of the enclosure to the awareness generated by the NGO about the economic benefits that can be derived from the forest. Plantations in the enclosures have generated employment and many species like bamboo, *awala, aloevera* have been planted and the villagers are aware of their potential benefits. The villagers are aware of the market linkages that are required for these species as they have been marketing minor forest produce.

Due to the various employment opportunities that have arisen, the out-migration of villagers has reduced drastically. Women in the SHGs want to start a dairy to link their livelihood with the enclosure. The enclosure itself will provide the necessary fodder for the milch animals and the milk can be sold at a milk collection centre in another village at close proximity.

Pre-enclosure 2002
Photocredit: B K. Sharma, Foundation for Ecological Security

Post-enclosure 2006
Photocredit: Rupam Kumar, Foundation for Ecological Security

Case Study – 3
Multi-stakeholder Partnership
Village Kyara ka khet, Udaipur district

Background

Kyara Ka Khet is a small village of 80 households located in Gogunda tehsil of Udaipur district. The village is inhabited predominantly by the Garasia and the Gameti tribes. In 2002, with the introduction of JFM, forest protection was undertaken for a 190 hectares forest patch. After the famine in 1986 the community had attempted to protect the forest but this led to conflicts.

The enclosure established under the project is not within the revenue boundary of Kyara ka khet and is located in the neighbouring village of Chitrawas. In 2002, an NGO, Foundation for Ecological Security, started active intervention in Chitrawas village. The forest protection intervention began with the identification of traditional user groups from Chitrawas, Kyara ka khet, Sakria, and Rijhwada.

Challenges

Chitrawas already had a JFMC with 13 members and the community was hesitant to include the three other traditional user groups in this committee. The main reservation of the forest department and the people of Chitrawas was that the patch of forest was within the revenue boundary of only the village. In addition, there existed an old conflict between the villagers of Chitrawas and Kyara ka khet.

However, residents of the other three villages refused to give up their traditional rights. At this stage, the NGO intervened and resolved to remove the deadlock by referring to maps drawn during the British period. After many meetings, the communities came together and a new JFMC was formed with representatives from all the four villages. There were initial hiccups and conflicts however; these died down as soon as benefits from the enclosure started to flow.

Participatory management

With time, the people of Chitrawas realised that they could not attend meetings often and contribute much to the protection of the enclosure. Decision-making soon shifted to the members of the other villages and Chitrawas accepted this arrangement as inevitable. A tripartite agreement was signed and included the forest department, the user groups, and the NGO. The agreement helped establish all individuals above the age of 18 from all castes and tribes as *hakdars* (traditional rights holders).

The users have now developed various mechanisms for benefit and cost sharing and have formulated a set of by-laws for penalties, voluntary patrolling, the use of the forest, and the systematic distribution of benefits such as fodder. Grazing is not allowed, no new trees can be cut and only dry wood can be picked. The penalties vary according to the type of livestock caught grazing. Higher penalties are imposed on those caught cutting bamboo and fresh wood.

Patrolling is done on a voluntary basis and one person from each of the participating villages patrols during the day. It has been six years since formal protection started and the institution has been strengthened through trial and error. The villagers also provide voluntary labour for activities like the repair of fencing and this indicates their sense of ownership towards the resource. The villagers received tremendous benefit through the enclosure. In 2006-2007 itself 700,000 bundles (locally known as *pullas*) of fodder grass were extracted. Each household had to pay a one-time fee of Rs. 25 to the committee for extracting fodder. Following the success of this enclosure, the communities have now set rules for other forest patches, within their boundary, that are not enclosed with stonewalls.

Enclosure of Sodhana
Photo credit: SHODH

Need for Active Intervention
Village Sodhana, Baran district

Background

Village Sodhana is located in Kishenganj block of Baran district. The village has two hamlets consisting of 190 households. In one hamlet resides a heterogeneous group that includes other backward classes and people from different religions. The other hamlet (*Tapra*) has residents that belong to the *Seheriya* tribe. The village has four enclosures of 50 hectares each, managed by the JFMC. Two of these enclosures were set up in 2004-2005, one in 2005-06 and one in 2006-07. It was during the famine of 2002 that the villagers realised the need for forest protection as they faced severe shortage of fodder and approached the Forest Department in this regard.

Participatory management

The villagers have formed rules of use though not elaborate. Ban on fresh wood for fuel is imposed and dry wood is allowed for collection. *Seheriya* women who were members of the JFMC as well as the SHGs narrated how they took up initial protection work by patrolling the enclosures with axe in hand. In the past, fodder has been extracted to save the enclosure from fire and this has been distributed free to whoever (residents of Sodhana as well as outsiders) wanted to collect it. Contradictory to what was mentioned by the JFMC president, the women SHG members said that fodder was sold at Rs. 5/bundle.

Recently under the National Afforestation project and FDA, various enclosure development activities were taken up such as fencing, plantation, soil and moisture conservation, etc. The SHG women who accompanied the research team members to the enclosures talked about the various species planted like *awala, neem*, *Karanj,* etc. However, the plantation has reportedly seen average survival as many plants had to be replaced/replanted. Villagers mentioned that the plantation of *Sagwan* (teak) and bamboo has seen failure. There were complaints about the dictates of the Forest Department over the selection of species for plantation. The enclosures have provided benefits to the community through fodder, and income-generating Non Timber Forest Products like Tendu leaves (which as the community members narrated have been extracted only in 2007-2008), *Ber, Beheda* etc. For the present year (2008) fodder was not extracted in order to allow it to regenerate.

These enclosures till very recently were guarded by paid guards. This was especially true for two enclosures. The Forest department paid Rs. 2000 per month order to guard the enclosures where plantation was undertaken. However, the department has now stopped the payment, resulting in apparent resentment among the villagers. Some of the other members of the village were unaware about the withdrawal of the paid guards and this reflects the level of interaction and collective action. At present some of the *Seheriya* household members, who live in proximity, guard the enclosures on an ad hoc basis since the area under protection is large for this small group. This has resulted in an uneven distribution of cost of protection and has affected protection work. Intervention from non-government agencies in this regard has been restricted to awareness building about joint forest management and sustainable use of forests and the focus of the NGO under the project has been more on development of SHGs.

6. SWOT Analysis of Enclosures

To analyse the role of enclosures in forest protection under the JFM programme, we have attempted SWOT (Strengths-Weaknesses-Opportunities-Threats) analysis of enclosures. This kind of analysis not only helps in identifying the replicable aspect of a programme but also prepares for the possible negative implications. It also helps in identifying areas where future efforts need to be concentrated, and in identifying areas for further policy change.

Strengths

1. Clearly defined boundaries
2. Reassertion of traditional rights
3. Protection and regeneration of species
4. Autonomy to apply traditional knowledge
5. Increased sense of ownership
6. Immediate livelihood benefits

Weaknesses

1. Expensive with recurring maintenance costs
2. No rights given to traditional migrant population
3. Possibility of conflicts
4. Success depends on the interest of the community
5. Lack of a mechanism to integrate management of water and forest resources
6. Choice of enclosure area in the hands of Forest Department

Opportunities

1. Prepare community for other activities under JFM
2. Long-term livelihood opportunities
3. Integration with other community interventions like SHGs

Threats

1. Communities that have not been given rights to the enclosures
2. Original cultivator/encroacher can assert his/her claim over the enclosed area
3. Withdrawal of funds for enclosures
4. Migration of local community exposes the enclosure to nomadic communities

6.1. Strengths

1. The very first of the eight 'design principles'[4] given by Ostrom (1990) for successful collective action, is 'clearly defined boundaries'. Enclosures achieve this by clearly demarcating the area that is to be protected.

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[4] The eight Design Principles are:
1: Rules that clearly define who has the rights to use a resource and the boundaries of that resource.
2: Congruence between the rules that assign benefits and the rules that assign costs. Both types of rules are well matched to local conditions such as soils, slope, number of diversions, crops, and so forth.
3: Collective choice arrangements used to modify the operational rules of the resource.
4: Monitoring for rule conformance.
5: Graduated sanctions.
6: Rapid access to low-cost conflict-resolving mechanism.
7: Minimal recognition of rights to organize.
8: Organized activities in multiple layers of nested enterprises.

2. Specific areas enclosed with a specific purpose result in a strong sense of affinity/ownership due to the reassertion of traditional rights (case study - 2). This also helps in promoting protection and regeneration.

3. Enclosures provide autonomy in applying the traditional knowledge in choosing the species. Communities are more likely to be aware of species, present in a specific patch of forest, and their utility (sustenance and medicinal), and thereby have the incentive to protect them. This has helped in the rejuvenation of traditional sustainable ways of harvesting (case studies 1 and 3).

4. Due to the involvement of NGOs there is better dissemination of information, greater involvement of community members, and better institution building.

5. Enclosures offer immediate employment generation as provided by the building of fences.

6. A sense of ownership leads to better institutional development that provides for stricter rules or a complete ban on outsiders, and thus reduces the pressure on these enclosures.

7. NGO intervention has led to the plantation of hybrid species of commercially viable crops, like *awala (Phyllanthus emblica),* in the enclosures.

8. At an initial stage of participatory management, enclosures are useful as they promote intra-community, as well as inter-community interactions (case study - 3).

"Fencing is visible to others and proclaims that some law or rule has been established on the enclosed piece of land. And that it is now protected." (Villager from Kyara ka khet)

6.2. Weaknesses

1. Enclosures are expensive and require not only a one time investment but also recurring maintenance cost. Expenses include payment for stone fencing[5] and for forest guards. If there is no provision for recurring expenses, such enclosures are likely to get dilapidated[6].

2. Enclosing a part of the forest without providing alternate forest area to meet daily needs results in additional pressure on other forest areas. This may lead to tensions either between the Forest Department and the community or between two communities.

3. Enclosures do not take into consideration the rights of the traditional migrant population that are traditional stakeholders and a part of the social system of the region[7] (case study – 2).

4. This system is likely to restrict regeneration/cross-pollination due to the restricted movement of cattle and thereby restrict species diversity.

5. Under the system, in most cases the Forest Department chooses the area for the enclosure and determines how much is to be enclosed. Local communities have no role in determining this. In some cases the forest department even chooses the species that are to be planted. Since, the

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[5] Stone fencing is expensive both in terms of initial building as well as maintenance. It cannot be built without substantial financial support and it cannot be properly maintained in the absence of continued support.
[6] As per an estimate provided by one of the partner NGOs the cost of building an enclosure is between Rs. 2,500 to 2,800 per hectare.
[7] People of village Ghatti in Baran district mentioned the Gujjars who have been using this patch of land. In village Kyara ka khet the migrants who have been visiting this forest area are the Raikas. People of Madikachar talked about migrant communities like Revaris that have been bringing their sheep for grazing in this forest for a long time.

success of the enclosure depends on the interest and awareness of the community, once support from the forest department is withdrawn, the system is likely to weaken (case study - 4).

7. Integration of water and forest management techniques is not done in all enclosures and in such cases the survival of plantations and the availability of fodder become problematic.

8. Lack of genuine interest of both the partners makes the enclosures ineffective. For example when the forest department does not provide the necessary backing to communities when they catch poachers/ outsiders, it puts a dent in the initiatives of the local communities.

9. Elite capture of enclosures even over traditional use areas of the local communities can lead to conflicts. Elite capture is often with the support of the local staff of the Forest Department.

6.3. Opportunities

Despite several weaknesses, enclosures provide significant support. Experts also concur that enclosures offer several opportunities and that gradually the physical wall of enclosures may be replaced by the invisible but strong walls of social fencing.

1. In places where traditional institutions have withered due to neglect over a long period of time 'enclosing' forests can become a stepping-stone towards institution building. They can resurrect the emotional and cultural bonding of forest dwelling communities with the forest.

2. Enclosures can also prepare the community to gradually take up other activities towards forest management.

3. Enclosures provide a sense of ownership and communities are likely to come up with innovative ideas to make the resource economically viable. Immediate returns like fodder and employment may get combined with long-term investments like fruit trees. Forest products (e.g. fodder) in excess of the community's needs could be sold and a fund can be set up to look after other needs of enclosure like the appointment of guards.

4. Initiatives of the Self Help Groups can be linked with those of the enclosures - integration of the livelihood of SHGs like that of running a dairy and supplying it with fodder extracted from enclosures.

"We have been brought up in areas around the forest. Even if we decide to sell the Kort [enclosure], what would happen to our future generations? How will they subsist? Staying with the forest is part of our tradition and we cannot give it up". (Villagers of Kyara ka khet)

6.4. Threats

Although 'enclosures' have their own advantages by keeping away unwanted persons and activities, they tend to deprive some genuine stakeholders. This can create problems in the light of the Act.

1. The section of the community that is adversely affected or deprived of the freedom to collect forest products, could try to sabotage the enclosure.

2. Under the Act, the rights to the forest resources go beyond revenue boundaries and extend to traditional boundaries. In that case the trans-boundary or nomadic communities could caste aspersions on enclosing certain forest areas.

3. The Act allows the original cultivator/encroacher to claim back the enclosed area if she is able to prove that the piece of land was cultivated by three previous generations. Enclosures are more likely to succeed in homogenous communities, because heterogeneous communities with their multiple and diverse interest groups are more likely to face conflict. Such conflicts exist at present too, but due to the engagement of NGOs, these are subdued. With the withdrawal of NGOs, conflicts are likely to come up with greater force[8].

4. Enclosures have been primarily created through external funds from development agencies or the government. Withdrawal of support – both financial and moral, could result in the community's loss of interest in forest protection and thereby, the withering of enclosures.

5. Due to the lack of/low income generation from enclosures, the local community is likely to continue to migrate (as in the case of the Seheriya community). In such periods, the enclosures face a threat from nomadic grazer communities or neighbouring shepherd communities.

> *"The hybrid awala promoted by NGOs, keeping in mind the marketability of produce, has overlooked the fact that this variety has a lower vitamin C content as compared to the natural variety. The hybrid variety also fetches a lower price. Once the hybrid variety is introduced in the market, the prices are likely to fall. Nobody has given a thought to this eventuality". (A villager in Shahapur)*

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[8] Village Pathari, Baran district, is socially heterogeneous and has three enclosures. The Yadavs and Seheriyas manage an enclosure each. However, it is the management of the third enclosure that has led to conflicts. The Seheriyas (tribals of the village) claim that the third enclosure has been traditionally used and protected by them for the past 20 years. With the introduction of JFM, the Yadavs came into the picture. This community is mainly dependent on livestock for their livelihood and had captured this enclosure in the past for grazing cattle. At present, the conflict is subdued due to the intervention of one of the partner NGOs.

7. Multi-stakeholder Partnership

The partnership of various stakeholders in the forest in general and JFM in particular is the most commendable aspect of this project. It has been proven earlier too that any effort that excludes a stakeholder is likely to run into trouble, although, the opposite is also true i.e. multiple stakeholders with conflicting interests also lead to difficulties. In case of the enclosures supported under the project, the main stakeholders are the communities, the Forest Department, the NGOs, and the government officials. At present there seems to be successful coordination among these stakeholders and the NGOs seem to be the main actors in striking this delicate balance.

Communities in general and SHGs[9] in particular are likely to be associated in the area of marketing of the forest produce derived from the enclosures. NGOs are already providing a market either by setting up processing and marketing units themselves [in case of *awala* and *tendu (Diospyros Melanoxylon)]* or through private contractors. The government has tried to eliminate the exploitation of private traders by appointing agents, from within the village, who can collect the minor forest produce from the villagers at a fair price and then sell it to agencies like Large-Scale Adivasi Multipurpose Society. Already, women from SHGs are working as such agents in villages like Madikachar. Their role can be further extended to the marketing of forest produce such as fodder grass, broom grass, and *awala*.

8. The Rights of the Communities under the Act

The inclusion of 'other forest dwellers', by the Act, for the settlement of rights over forestland has reduced the pressure, on communities, to prove or disprove their inclusion in the category of Scheduled Tribes. The Act is very clear on secure tenure on land that has been cultivated, as on 13th Dec. 2005, for the past three generations. Even in the case where rights are not recorded but where the community has been living in the forest for three generations or more, the rights are to be vested by the *gram sabha* of the village. Therefore the problem of the *Kherua* community (Annexure-2) that has arisen as a result of being recorded as scheduled tribes in one district and not in another could be sorted out under the Act.

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[9] SHGs are already involved in the collection and marketing of forest produce from the non-enclosed forest areas.

9. Suggestions for Future Actions

Suggestions, in the light of the Act, have been enumerated based on fieldwork, discussions with community members, and interviews with key informants. There is a lot of scope to provide positive interventions that can implement the Act usefully for the communities and for the forest.

1. Confusion exists among NGOs, communities, forest and other government officials on the status of the existing forest policy and JFM in the light of the Act. The changes in the roles to be played by each actor under the new legislative arrangement are not clear and this needs to be brought in without delay. For this, workshops may be organized, booklets in local languages may be published, and support to *panchayats* and *gram sabha* may be provided.

2. Communities can benefit from the Act only after going through a well-defined process of staking claims, getting them verified, forwarding them to the district committees, getting them approved and then implementing them. To follow this process, communities would require support from NGOs. Some of the steps that need to be taken for staking claims are:
   a. Control of traditional and homelands and staking a claim for protection, conservation, regeneration, sustainable use, and management
   b. Claim for rights (keeping in mind seasonal users) by passing a resolution by inviting claims and filing the rights within three months to the Forest Rights Committee
   c. Verification of claims verified and reconciliation and submission of claims to the sub-divisional level committee
   d. Obtain directions from the district level committee

3. Communities have just started to appreciate the use of enclosures, and have started to plan their management. In this light, continuous support is required for the process to gather momentum. Assessments can be undertaken, by development agencies, to judge the areas for and duration of support.

4. The integration of the activities related to enclosures and those related to SHGs would result in greater synergies. The Forest Department could outsource the enclosure related activities to SHGs[10] and they could be given the responsibility of developing nurseries and carrying out plantations.

5. Planning of the flow of excess forest produce from enclosures is necessary[11]. Sustainable harvesting, storage, packaging, processing and marketing of the products flowing out of enclosures are the activities that would need attention and intervention.

6. The role of enclosures needs to be extended further from 'protection' to 'production'. Conscious efforts need to be made to improve the quality of the forest protected in enclosures; only then can these yield incomes and not remain as suppliers of sustenance products. This is also important to increase stakes of communities on forest.

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[10] Women of SHGs in villages Madikachar and Hatrikheda form part of the seven-member sub-committee of the Joint Forest Management Committee that manages the enclosures. SHGs can integrate fodder availability in enclosures with dairy marketing. This process has already started in Madikachar with the initiative of 'Sankalp'.

[11] In order to assess seasonal fodder availability Foundation for Ecological Security has suggested the adoption of the most common technique of randomly assessing biomass (grass) from various points of a plot (which can be a class of land under any land-use). One needs to have 1m x 1m sample plots according to the size of forest. The entire biomass from each sample has to be harvested and weighed and then analysed to project a general finding of the total availability on the plot.

7. Apart from the plantation of useful, income generating species, an activity that will help improve the quality of these species is watershed management[12].

8. Efforts also need to be directed towards nesting of all the village level institutions with the *Panchayat*, and then inter-linking all the *Panchayats* with a common ecosystem. For example, the protection of an uphill water source will benefit the forest and communities located below, if nesting of institutions exists.

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[12] In Sodhana village, check dams which provide water for plantations have been set-up within the enclosure. This is also the case in Hatrikheda village. However, in Ghatti village, there is no such integration with water management and this has lead to a low survival rate of the plants in the enclosures.

Table - 1: Benefits from Enclosed and Unenclosed Forests

Village	Kyara Ka Khet	Madikachar	Hatrikheda	Sodhana
Total no. of households in the village	80 (349 households from Chitrawas, Sakria, Richwara, and Kyara Ka Khet – all *hakdaars* of the Village Forest Protection and Management Committee)	18	18	190
Major economic activities of the people	Agriculture, wage labour, animal husbandry, and sale of Non Timber Forest Products (NTFPs)	Agriculture, wage labour, and collection and sale of NTFPs	Agriculture, wage labour and collection and sale of NTFPs	Agriculture, NTFP collection, kitchen gardening, seasonal migration, handicraft based entrepreneurship, animal husbandry, orchard development, and nursery raising
Type and degree of dependence on forest	High degree of dependence as there are direct and indirect benefits from the forest, such as fodder, fuelwood, timber, fruits, NTFPs, wood for construction of agricultural equipments and houses. The forest forms part of local tradition and so cultural	High degree of dependence as the forest helps meet subsistence and livelihood needs - gum, tendu leaves, fuelwood, medicinal plants, vegetables, fodder, fruits and flowers like Mahua (*Madhuca longifolia*), Achar	High degree of dependence as subsistence and livelihood needs are met - gum, tendu leaves, fuelwood, medicinal plants, vegetables, fodder, fruits and flowers like Mahua (*Madhuca longifolia*), Achar	High forest dependence for fuelwood, grass, and NTFPs. Species usually harvested are teak (*Tectona grandis*), Bamboo (*Dendrocalamus*), Amaltas (*Cassia*), Shisham (*Delbergia sissoo*), Dhok, Khankhara (*Butea monosperma*) Awala (*Emblica officinalis*), Kher (*Acacia catechu*), Siris (*Albergia*

Village	Kyara Ka Khet	Madikachar	Hatrikheda	Sodhana
	value is attached to it.	(Buchanania lanzan), and Awala (Phyllanthus emblica).	(Buchanania lanzan), Khair (Acacia catechu), and Dhokda (Anogeissus latifolia)	lebback), Neem (Azadiracta indica), Desi ber (Ziziphus mauritiana), Karanj (Pongamia pinnata), Babool (Acacia nilotica), and Ratanjot (Jathropha curcus)
Total area of forest land to which the village has access	276 hectares	65 hectares	95 hectares	380.69 hectares
Total area of forest land enclosed	190 hectares (One multi-user group enclosure)	30 hectares (One enclosure)	15 hectares (One enclosure)	200 hectares (Four closures of 50 hectares each)
Total cost incurred from the current project	Rs. 315,929	Rs. 90,000	Rs. 377,117	Rs. 212,500
Total contribution from the Forest Department	Nil	Rs. 36,500 for fencing	Nil	Rs. 1,153,400 on advance work, plantation, Entry Point Activities, Soil and Water Conservation work, fencing, and maintenance
Total community contribution	Shraamdaan (voluntary labour) of 2-3 days for repairing of boundary	Rs. 48,500 from the Village fund for activities including	Voluntary labour equivalent to Rs. 10,950 for construction of a 150-	10 per cent community contribution in all Natural Resource Management

Village	Kyara Ka Khet	Madikachar	Hatrikheda	Sodhana
	wall and protection of the plot (*chawkidaari*).	monthly payment of watchmen	meter enclosure wall; voluntary labour equivalent to Rs. 5000 for plantation work; Rs. 13,500 contributed to the village fund to be used for maintenance of enclosure	based activities under this project and 10 per cent in Entry Point Activities work in JFM programme as voluntary labour
Any other contribution	Rs. 1,177,856 from Swedish International Development Agency, National Dairy Development Board, National Rural Employment Guarantee Scheme	Rs. 248,000 (State government provided contribution under the Seheriya Employment Guarantee Scheme)	Nil	Nil
Seasonal and annual benefits derived from the unenclosed forest land	Fuelwood, NTFPs such as custard apple, jatropha, and fodder	Estimated benefit per month per family: *January:* Gum, medicinal plants, and fuelwood (equivalent to Rs. 600), *February:* Gum, tendu, fruits, and fuelwood (equivalent to Rs. 800), *March:* Gum, mahua beel (*Aegle*	Estimated benefit per month per family: *January:* Gum, medicinal plants, and fuelwood (equivalent to Rs. 600), *February:* Gum, tendu, fruits, and fuelwood (equivalent to Rs. 800), *March:* Gum, mahua, bil fruit, and fuelwood	Fuel wood and grass are freely available. It is due to its free availability that annual benefits cannot be quantified.

Village	Kyara Ka Khet	Madikachar	Hatrikheda	Sodhana
		marmelos) fruit, and fuelwood (equivalent to Rs. 1000), *April:* Gum, mahua, achar (*Buchanania lanzan*), and fuelwood (equivalent to Rs. 1500), *May:* Gum, tendu leaves, achar, and fuelwood (equivalent to Rs. 1500), *June:* Gum, tendu leaves, and fuelwood (equivalent to Rs. 1000), *July:* Medicinal plants, vegetable leaves, and fuelwood (equivalent to Rs. 300), *August:* Medicinal plants, vegetable leaves, and fuelwood (equivalent to Rs. 300), *September:* Medicinal plants, grass, and fuelwood (equivalent to Rs. 200), *October:* Grass and fuelwood (equivalent to Rs. 500), *November:* Medicinal plants and fuelwood (equivalent to Rs. 300), *December:* Medicinal plants and fuelwood (equivalent to Rs. 300).	(equivalent to Rs. 1000), *April:* Gum, mahua, achar, and fuelwood (equivalent to Rs. 1500), *May:* Gum, tendu leaves, achar, and fuelwood (equivalent to Rs. 1500), *June:* Gum, tendu leaves, and fuelwood (equivalent to Rs. 1000), *July:* Medicinal plants, vegetable leaves, and fuelwood (equivalent to Rs. 300), *August:* Medicinal plants, vegetable leaves, and fuelwood (equivalent to Rs. 300), *September:* Medicinal plants, grass, and fuelwood (equivalent to Rs. 200), *October:* Grass and fuelwood (equivalent to Rs. 500), *November:* Medicinal plants and fuelwood (equivalent to Rs. 300), *December:* Medicinal plants and fuelwood (equivalent to Rs. 300).	

Village	Kyara Ka Khet	Madikachar	Hatrikheda	Sodhana
Seasonal and annual benefits derived from the enclosed forest land	Fodder grass, fuelwood, NTFPs such as broom grass, custard apple, palash (*Butea monosperma*), and Jatropha. Availability of all these is greater in the enclosed forest land.	At present forest products are being obtained from the pre-existing plants in the enclosure as the plantations are yet to result in output. The yield and the estimated value/income is – palash leaves (1200 kgs, Rs. 1200), kuretha (*Wrightia tinctoria*) (1400 kgs, Rs. 28,000), behead (*Terminalia bellirica*) (150 kgs, Rs. 2450), kher (*Acacia catechu*) (6 kgs, Rs. 600), reja (100 kgs, Rs. 200), dhokada (15 kgs, Rs. 1,875), tendu (Rs. 100 kgs, Rs. 1500), ber (*Ziziphus jujuba*) (150 kgs, Rs. 1200), dakhanni babul (*Pithecelloobium dulce*) (Rs. 2500), desi babul (*Acacia nilitica*) (Rs. 200), beel (*Aegle marmelos*) (240 kgs, Rs. 3,600).	The pre-existing plants provide various products that generate an income. An estimate of yield and income has been done for 2007-08 for products like mahua (400 kgs, Rs. 8000), achar (60, 1000), tendu (1000 kgs, Rs. 6000), palash (1500 kgs, Rs. 10,000), beheda (5000 kgs, Rs. 15,000), khair (50 kgs, Rs. 7,500), dhokada (10 kgs, Rs. 1500), awala (200 kgs, Rs. 2000), grass (12 trolleys, Rs. 96,000), fuelwood, kuretha, kari (*Milliusa tomentosa*), baikal, makhoda (*Zijiphus oenoplia*), zhadi ber (*Ziziphus nummuleria*), gurjen (*Lannea cormandelica*), kardai (*Anogeissus Pendula*), neem (*Azadirachta indica*), alsuzhiya, chilera (*Casearia tomentosa*), seda, shankhpushpi (*Convolvulus pluricaulis*)	Timber wood bamboo wood, grasses, and NTFPs like fruits, seeds, and leaves. An estimated 9,000 to 10,000 quintals of grass, 1000 quintals of NTFPs like tendu leaves, ber, and beheda are obtained from the enclosures. Moreover, all enclosures are in their 4th year and it is expected that in the coming 3-4 years, atleast 70-80 cubic meters of timber productivity will be achieved per hectare.

Annexure–1
List of Villages Visited and Persons Interviewed

1.   Gramin Vikas Trust (GVT), Baran district
2.   Bharatiya Agro Industries Foundation (BAIF), Baran district
3.   Sankalp, Baran district
4.   Centre for Community Economics and Development Consultants Society (CECOEDECON), Baran district
5.   Astha, Udaipur district
6.   Samarthak Samiti, Udaipur district
7.   Foundation for Ecological Security (FES), Udaipur district
8.   Mr. Shambhu Singh, Programme Co-ordinator, Gramin Vikas Trust, Baran
9.   Dr. D.K. Varshney, Programme Co-ordinator, Gramin Vikas Trust, Banswara
10. Mr. P.G. Solanki, Co-ordinator, BAIF, Kishenganj
11. Mr. Chaudhary, Associate, BAIF, Kishenganj
12. Mr. Motilal, Director, Sankalp
13. Mr. Gajraj, Field Co-ordinator, Sankalp, Shahbad
14. Mr. Vinod, Field Co-ordinator, Sankalp, Shahbad
15. Mr. Chanda, Associate, Sankalp, Shahbad
16. Mr. Surendra Sen, District Project Co-ordinator, CECOEDECON, Shahbad
17. Mr. D.K. Gupta, Range Forest Officer, Shahbad
18. Mr. J.P. Yadav, Area Manager, Hadoti Shetriya Gramin Bank, Baran
19. Dr. R.P. Gupta, Chief Medical Officer, Kishenganj
20. Mr. R.S. Trivedi, Child Development Project Officer, ICDS, Baran
21. Mr. K. Rathod, Co-ordinator, Samarthak Samiti, Udaipur
22. Mr. Mukesh, Project Co-ordinator, Samarthak Samiti, Udaipur
23. Mr. R.D. Viyas, Director, Astha
24. Mr. Tiwari, Co-ordinator, Astha training center, Kothra, Udaipur
25. Ms. Sunita, Field Co-ordinator, Astha, Udaipur
26. Mr. Chandan Jain, Programme Co-ordinator, Astha
27. Mr. Mitul Barua, Team leader, Foundation for Ecological Security, Udaipur
28. Mr. Roopam Kumar, Team Leader, Foundation for Ecological Security, Udaipur
29. Ms. Rebecca David, Programme Officer, Foundation for Ecological Security, Udaipur
30. Ms. Rubiyana, Programme Officer, Foundation for Ecological Security, Udaipur
31. Mr. Prasanta Pradhan, Project Co-ordinator, GOI-UNDP Project on Social Mobilisation for Poverty Alleviation, MoRD, New Delhi
32. Mr. Rajeev Jain, Ministry of Rural Development, New Delhi

Villages visited

1. Madikachar, Baran district
2. Hatrikheda, Baran district
3. Pathari, Baran district
4. Sodhana, Baran district
5. Ghatti, Baran district
6. Kaglabhamori, Baran district
7. Fhaldi, Baran district
8. Parampur, Baran district
9. Pazhantodi, Baran district
10. Pheredava, Baran district
11. Shahpur, Baran district
12. Biyol, Udaipur district
13. Kyara ka khet, Udaipur district
14. Vanga hamlet of Samlathala revenue village, Udaipur district
15. Patiya, Udaipur district
16. Subari, Udaipur district

Annexure–2
Status of the Kherua Community

The Kheruas are said to be *katha* [extract of Khair (*Acacia catechu*) tree] collectors who came from Maharashtra around fifty years ago and settled in Baran district. They were *Gonds*, a predominant tribe of central India. Later they came to be known as *Kherua* as their profession was to collect *Katha* from the Khair (*Acacia catechu*) tree. Their kin, settled in Udaipur area, came to be known as *Kathodia*. Both the *Kherua* and the *Kathodia* were considered as 'tribals'. However, a change in status came about 36 years ago, when the local *Tehsildar* (of Baran district), a *Jat*, recorded the *Kheruas* as *Goud* instead of *Gond,* in the 1971 census. *Goud* was a name given to the higher-caste *brahmins* and so the *Kheruas* lost their tribal status. After protests from the community, the government changed the records and brought them into the category of Other Backward Castes.

The *Jats* of Baran took advantage of this changed status by taking possession of the *Kherua* agricultural land. This resulted in the migration of the *Kheruas* from the district a phenomenon also supported by the decline in the number of *Khair* trees. NGOs like 'Sankalp' raised this issue at various administrative and political levels because they had witnessed a transition in the economic status of the *Kheruas* and were keen to restore their status. However, not much progress could be made the community itself was not ready to fight for this cause. Unlike the *Seheriyas* who have access to special welfare schemes, the *Kheruas* are fast losing ground.

According to a survey carried out by Sankalp, about 5000 to 6000 *Kheruas* in 892 households remain in one village of Shahbad Block and 11 villages of Kishenganj Block. They constitute around one per cent of the population of the area with 84.38 per cent of this population being illiterate. The survey further found that out of 892 families only eight have revenue land, 64.38 per cent of the agriculture land is not irrigated, about 60 to 70 percent of the people work on stone mines (Baran and Kota mines) for 7-8 months every year, five per cent of the labour class are bonded labourers (Fall Brook Center *et al*. presentation in 2006), and are thus still being exploited by the *Jats*.

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ABOUT US

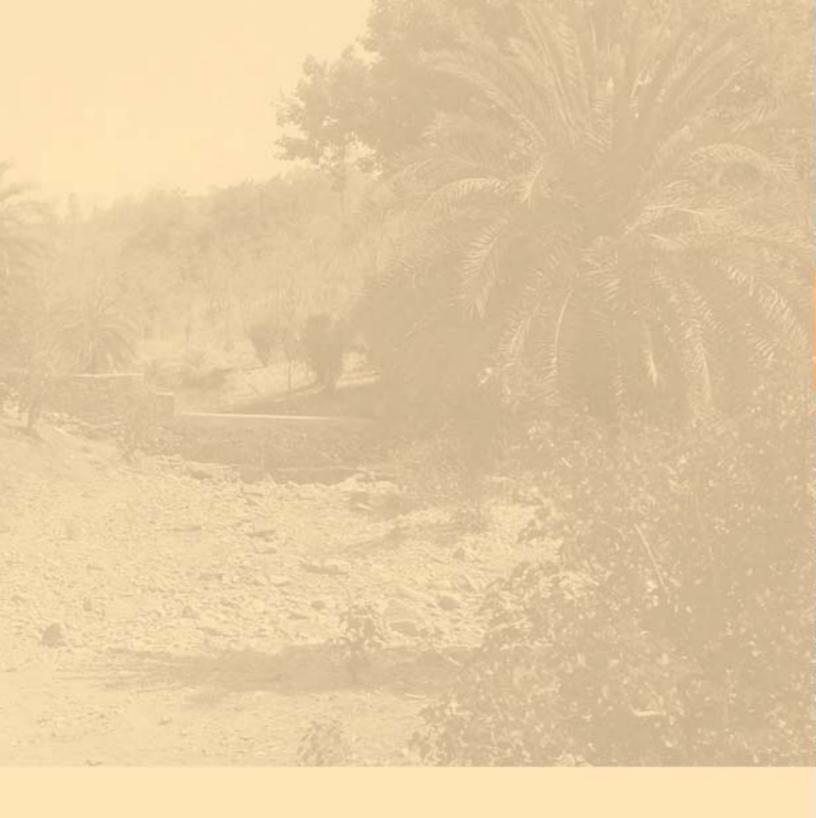### Ministry of Rural Development, Government of India

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