CHAPTER II
Dissecting the Community:
Search for Impeccable Characteristics for Collective Action

2.1. Community in Conservation and Management

The term ‘community’, in the last couple of decades, has emerged as a panacea to the problems of under-development and natural resource degradation in the third world countries; and has, thus, occupied the centre stage in policies promoting ‘development’, ‘democratisation’ and ‘conservation’. A complete array of factors have joined together to make community attractive to the policy makers, and bestow on it the status that it enjoys today in the policy arena. A strong disillusionment with the performances of the state in delivering the fruits of development to the people, coupled with market imperfections in distributing rewards equitably, are a few among several other reasons that have resulted in looking forward to the communities for solutions. Therefore, academicians, policy makers and development practitioners are now of the opinion that resorting back to communities along with an increased emphasis on popular local participation can help achieving broader goals, which, otherwise, would have been difficult to achieve. However, a historical perspective on the role of community in the policy arena may suggest otherwise. Traditionally, communities have been out of place in developmental debate and did not enjoy the kind of attention that now they seem to enjoy. The marginalisation of community in almost all spheres of policy activities notwithstanding, in the following paragraphs, I concentrate on the ‘re-emergence of community’ in conservation and management of local natural resources. Before that, it is apt to engage in a general understanding of the history of the community in Indian developmental experience.

2.1.1. Back to the Community

I have used the word ‘re-emergence’ of communities, keeping in mind that ‘panchayats’, ‘village republics’ or governing councils of village elders have been in existence, in some form or the other, since ancient times. These councils, sometimes in the form of caste panchayats, have been responsible for managing the overall
affairs of the village communities. During the period prior to the British Conquest, there have been instances of forests being owned and managed by self-sufficient village communities with traditional practices and indigenous knowledge, though de jure ownership of the forests were in the hands of the king, which resulted in the effective conservation of Indian forests through religious sanctions and social regulations (see, Guha, 1983; 1989). Many traditional Indian scriptures, including Manusmriti, Kautilya’s Arthasashtra, and the two great epics of Ramayana and Mahabharata, speak of the existence of such village level organisations to cater to the needs of rural communities. The reliability of such traditional and religious scriptures has been debated and has been modified by contemporary historians (see, Stein, 1980; Thapar, 1984).

Perhaps the first modern attempt to note down the characteristics of village communities was by Sir Charles Metcalfe, a nineteenth century British official, who wrote about the village communities as ‘little republics having nearly everything they want within themselves and almost independent of foreign relations. They seem to last where nothing else lasts’ (Metcalfe, 1830: 331 – 32; cited in Vasavada et al., 1999: 153). Despite the impression sounding to be extreme, it no doubt proves the existence of independent community organisations at the village level during the pre-colonial period. Nehru’s (1946) masterpiece, The Discovery of India, also makes a reference to such independent village panchayats in the traditional India. The existence of such village level organisations notwithstanding, scholars have opined that ‘they have been progressively undermined by the introduction of British legal system, by British method of revenue collection and, outside the northern and parts of central India, by the introduction of zamindari and ryotwari land tenure systems’ (see, Vasavada et al., 1999: 154).

During the time of independence, when the importance of communities had already been relegated to a corner, India had two alternative models of development and reconstruction: the Gandhian model of reviving the village economy as the basis of development, and the Nehruvian model of development through rapid industrialisation. While Gandhi visualised the village community to be the core of developmental programmes and a platform from where to begin the process of development of the nation, it was Jawaharlal Nehru who envisioned a modern India
with rapid industrialisation and urbanisation. On 5th October 1945, Gandhi wrote a letter to Nehru in which he outlined his dream of free India:

> I believe that, if India is to attain true freedom, and through India the world as well, then sooner or later we will have to live in villages — in huts, not in palaces. A few billion people can never live happily and peacefully in cities and palaces ... my village exists today in my imagination ... Men and women in this imagined village will live freely, be prepared to face the world. The village will not know cholera, plague or smallpox. After all this, I can think of many things, which will have to be produced on large scale. May be there will be railways, so also post and telegraph. What it will have and what it will not, I do not know. Nor do I care. If I can maintain the essence, the rest will mean free facility to come and settle. And if I leave the essence, I leave everything ... (cited in Baviskar, 1995: 20).

Despite Gandhi’s emphasis on returning back to communities as the centre stage of development and progress, his ideas were discarded in independent India, mostly by the ideas of nationalist leaders, such as Nehru, Patel and others. Nehru’s extraordinary reliance on industrial progress and new scienticism — partly influenced by the West and above all by his exposure to a wider worldview — did not take into consideration Gandhi’s idea of self-reliance village communities. Responding to Gandhi’s letter he wrote:

> It is many years since I read Hind Swaraj and I have only a vague picture in my mind ... A village, normally speaking, is backward intellectually, culturally and no progress can be made from a backward environment ... (cited in Baviskar, 1995: 21).

The then nationalist leaders and development planners believed that through rapid industrialisation and urbanisation, and through creation of a strong nation state, India could catch up with the West. It was believed that developmental outcomes achieved through rapid industrialisation would trickle down to village communities, and economic growth would automatically bring about socio-political development of the Indian masses. In the process, the ‘community’ was further sidelined and the idea of nationalism and national interest swayed over the interests of the community. The reflection to it was visible in almost all sectors of development, more prominent being in the natural resources, with nationalisation of forests, creation of reserved and protected areas undermining the needs and requirements of the communities. Communities were kept out of planning and management of natural resources, and remained at the receiving end of government policies, which were so much state-centric in nature.
The relegation of the notion of community was further supported with the advancement of new sociological theories of social change and development. The sociologists of 19th and early 20th century, such as Sir Henry Maine, Auguste Comte, Herbert Spencer, Emile Durkheim, Ferdinand Tonnies, Karl Marx and Max Weber tried to capture the ongoing changes that were happening during their period as disappearance of communities and its replacement by a new form of social organisation, which was more individualistic, impersonal and heterogeneous in nature. These theorists described that members of the society of their time came to relate each other in completely different terms than that of past. In this newer form of interaction and society, ‘status, tradition and religion gave way to equality, modernity and a scientific temper’ (Agrawal, 1999). The differential treatment to the processes of change in the writings of these scholars notwithstanding, a factor, which was common to all, was that the modern society was fundamentally different from anything that had come before, and in this modern society there has been a decline in the local forms of social organisation, namely, the community.

The modernisation theorists of mid 20th century out-rightly rejected the notion of the community and pitted it against marketisation, industrialisation and economic growth. The modernisation theorists visualised particularistic affiliation to religion, traditions, and ethnicity as impediments to modernisation and economic development and openly argued against community, which clung to such factors. Most importantly, they saw the cultural, institutional and organisational features of poorer countries, which revolved around community feelings, as roadblocks in their attempts to develop and democratise (Roberts and Hite, 2000: 8–9). Community was visualised as a potential obstacle to modernity, growth and development, which were considered as very much desirable. The effective way to modernise, grow and develop was, therefore, visualised through eroding and/or doing away with the feelings and ties that community encouraged.

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6 For a detailed understanding of these theories see Aron, 1970; Cowen and Shenton, 1995; Roberts and Hite, 2000; Giddens, 1992. To understand the shifting position of the community in these theories of change and evolution, see, Agrawal, 1999, and Agrawal and Gibson, 1999.

7 See Huntington, 1971; Inkeles, 1969; Lerner, 1958; Rostow, 1971; McClelland, 1961 and Hoselitz, 1964 for a better understanding of the modernisation theory.
Drawing insights from some of these theories and owing to our own developmental experience of first few years of independence, the concept ‘community’ became out of fashion from the lexicon of development and conservation. With the adoption of Nehruvian economy of rapid economic growth with large-scale industrialisation, people-based development lost its focus and significance, and development became a state prerogative. Although the need for development of rural communities was acknowledged, it became the responsibility of the state to deliver the fruits of development to the rural communities through top-down models of development. Thus, the engines to rural development such as Panchayati Raj, Community Development Programmes, etc., all came under the direct control of the state mechanism.

However, the situation began to change in the 1970s, when criticisms started pouring against the dominant paradigms of mainstream development. Disillusioned by the developmental experience of previous two to two and half decades, academicians and development practitioners became critical towards GNP-focused, growth-centred development. The dismal results of state-centred development coupled with the increasing cost to deliver development, forced the policy makers to move towards a new approach to development, an approach, which visualised people’s participation, equity and sustainability to be the centre-stage of development process. With such a changing approach to development, the community again reemerged as the core of development and began taking the responsibility of conserving natural resources in its vicinity and empowering its members through greater decentralisation.

Having gained a perspective on the historical reemergence of community, in general, I now move forward to discuss how the community has been perceived in the conservation and management of natural resources.

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Fore a critique of mainstream development and the search for an alternative paradigm, see, Dube, 1988; Haq, 1976. The underdevelopment theories also pose a structural critique to modernised approach to development. For details, see, Santos, 1969; Baran, 1962; Frank, 1971.
2.1.2. Community in Conservation

The history of community in conservation, like in development, is also a revivalist one. Prior to independence, it was the responsibility of the village communities to look after their village tanks for irrigation and drinking water, forests for food, fodder and fuelwood, village pasture land for common grazing, etc. The village communities had autonomous institutions in this regard. However, with the passage of time such institutions became defunct and as a result, the resources started degrading.

With the coming up of British Raj in India, the colonial administration tried to consolidate the state power, and as a repercussion monopolised the natural resources of the country. The colonial attitude to monopolise the natural resources was more visible in the forestry sector. With the introduction of scientific forestry and reservation of forest blocks, the communities became outsiders to resource management, which became the sole responsibility of the colonial state. The marginalised status of community could not see a positive attitude even after independence. The policy of centralisation and monopolization of natural resources, which was in vogue during the British Raj, was reinforced, intensified and extended even after independence. The legal successor to the colonial state - the political and economic elites of modern independent India - continued to rely on earlier colonial legal usurpation of India’s natural resources and reinforced the rights of the state to exclusive control over such resources.

At the policy level also the scholarly writings concerning conservation of natural resources perceived communities as a threat to protection of precious natural resources (see Hardin, 1968; Eckholm, 1976). It was perceived that conservation of natural resources require their protection from human interference, whereas members of local communities depend upon them for their daily livelihood and thus exploit them without any restraint (Agrawal and Gibson, 1999: 631). Further, Hardin’s (1968) seminal work, *The Tragedy of the Commons*, theoretically proved that human interference into natural resources would ultimately result in degradation of the resource. Hardin’s thesis concluded that co-users of a common pool natural resource are trapped in a situation in which, in the absence of any regulated access to the

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9 For an understanding of the ecological history of Indian and the colonial treatment to India’s forests, see, Guha, 1989; Gadgil and Guha, 1992; Grove, 1998.
resource, each rational user is motivated to consume/use more and more units of the resource system till the resource is completely degraded. Thus, collective and unregulated use of the resource would finally lead to its overuse and degradation, and individual rationality of each user would not favour any coordinated action to regulate the use of the resource. Such being the inherent problem, the solution, which was put forth by Hardin and many other scholars, (Demsetz, 1967; Smith, 1981; Ophuls, 1973; Hardin, 1978) was either to nationalise or privatisate the resource, wherever feasible.

In either of the solutions to the problems of natural resources, the community couldn’t find a place for itself in the conservation activities of natural resources. It should be pointed out, however, that while designing such solutions to the problems of overuse and degradation of natural resources, the scholars had only in mind the physical sustainability of the resource, undermining the needs and requirements of the local population, who depended upon such resources for substantial part of their livelihood. The scholars and policy makers arguing for nationalisation and/or privatisisation of natural resources failed to perceive the sheer presence of human population inside the natural resources arena and the intrinsic relation between rural communities and their immediate resource base. However, an one-sided approach to the problem of natural resources couldn’t succeed in conserving the natural resources. Later studies on the effect of nationalisation of resource base made it clear that nationalisation converted the common pool resource to a de jure state property, while in reality degenerating it into de facto open access regime (Arnold, 1998; Arnold and Stewart, 1991). The heavy hand of the state in monopolising and centralising the natural resources in India, say forests, always coexisted, paradoxically, with degradation of India’s forest resources. Even though, the problem of deforestation has been controlled to some extent, the real problem in India’s forests has always remained with ‘degradation’ of the quality of forests (Kumar et al., 1999).

The persistent degradation of India’s natural resources despite strong policies of centralisation and state control, in the last couple of decades, has questioned the very premise of state’s policies towards natural resource conservation. The disillusionment with regard to the state-centred development, it is being perceived now, has also included in it dismal results of state-centred natural resource
management. The failure of the state-centric approach has proved that very few alternatives other than community-based approach exist (see, Wells and Brandon, 1992; Gibson and Marks, 1995).

Besides the state-failure in conserving natural resources, despite strong policies of centralisation, there are various other factors, which have contributed to the reemergence of the community in conservation activities. Broadly speaking four factors may be identified, that have compelled the policy makers to look upon the community as the starting point of conservation.

First, failures of the previous two and half developmental decades (1950s, 1960s and up to mid 1970s) have already made it clear in the early 1980s the limitations of the state. It has been affirmed that the state is not the only agency for development of the local people, and debates about the potentials of the community have already begun. This, coupled with limitations of state in conserving natural resources alone, again strengthened the positions of the community as potential partners in the process of development and conservation.

Secondly, with the spread of popular democracy and decentralisation, and above all with increasing demand on people’s participation, the unrepresentative policies of conservation came into criticism (see Agrawal and Gibson, 1999). The reflections of policy changes at the larger level for deepening democracy, widening development up to the grass-root level and empowering the indigenous population also became visible in the natural resource sector. Empowering the local people and accelerating their development process and allowing them a greater say in the policies that affected their livelihood were perceived only through uplifting ‘communities’ and giving them a share in natural resource conservation.

Thirdly, evolution of Non-governmental Organisations (NGOs) as an intermediary in development, which relied more on community than state, also contributed to the changing status of the community in the conservation debate today. The efforts of the NGOs to amplify the voices of the local indigenous population, and build their capacity for collective action at the local level for their own development have also helped the community in regaining its strength and being able to conserve
and manage its local natural resources. Further, the flow of heavy financial aids from external donor agencies, who emphasise on local knowledge and people's participation, boosted the communities to take the lead role in conservation activities with the help of local NGOs.

Finally, the scholarly writings about the ecological histories, environmentalism and success stories of communities managing their local resources sustainably also strengthened the position of community. Historical ecologists emphasised the 'anthropogenic' nature of forest and the inalienable history of environments and human population (see Denevan, 1992; Anderson and Posey, 1989). Agrawal and Gibson (1999: 632) summarising the works of ecological historians state that, 'new revisionist ecological research began to question the two main planks of coercive conservation. First was that pristine environments untouched by human hands existed until the very recent past. The second was the belief that indigenous and other local communities had been relatively isolated in the past, and therefore, used their resources sustainably'. In the tropical areas the growing presence of human population in the forested areas made creation of wildlife areas and conservation parks without human interference a difficult proposition. Even the Indian environmental historians (see, Gadgil and Guha, 1995; Guha and Martinez-Alier, 1997; Guha, 2000) have also pointed out that the peculiarity of southern environmentalism, and Indian environmentalism in particular, lay in its inseparability from human population. Unlike northern America, where a clear distinction between natural landscape and human landscape exists, the Indian natural landscape has always coexisted with human population. Under such conditions, it became clear that any policy aiming at excluding local communities from conservation activities is bound to be failed.

Adding to these historical writings, the current advancement of research in common property has also glorified the capabilities of local communities in sustainable management of its local natural resources (See Berkes, 1991; Bromley et al., 1992; McKean, 1992; NRC, 1986; Ostrom, 1990; Wade, 1988). These works have pointed towards community as a suitable alternative to nationalisation and privatisation, highlighting the importance of local knowledge and local institutional arrangements. The case studies depicting success stories of resource management by
local communities have challenged the notion that state control and privatisation are necessarily the only preferred solutions to problems of natural resource management. Consequently, community management of common pool natural resources has been acknowledged as a third solution to commons problems by scholars from various disciplines.

Recognition of the significance of community in conservation and management activities of natural resources leaves us with a further question: do all communities are equally capable of sustainable resource management? If returning back to the community is the preferred solution to the problems of over-use, free-riding and degradation of natural common pool resources, then why do some communities succeed in collective action for sustainable management of local natural resources and some fail in this attempt? Or, as indeed the question, what are the characteristic features of the community that support community-based conservation? There are several characteristics of the community, which favour collective action like, smallness in size, strong and effective leadership, successful past record of collective action, shared norms and reciprocity, etc., which I have already discussed in the previous chapter. In the following section, I therefore, make an attempt to review various scholarly works pertaining to the nature of the community — in terms of homogeneity and heterogeneity —and its potential for collective action at the local level for sustainable resource management.

2.2. Community Characteristics and Sustainable Collective Action

Notwithstanding the fact that scholars on community-based common pool resource management seem to agree on facilitating or favourable conditions for successful collective action at the community level to sustainably manage the local commons\(^\text{10}\), there still persists ambiguity regarding the relationship between the nature of the community and successful collective action. The twin issue of 'group size' and 'social composition' of the group in terms of homogeneity or heterogeneity form an

\[^{10}\text{For an understanding of these factors see, Baland and Platteau, 1996; Ostrom, 1990 and Wade, 1988. An attempt has been made in the previous chapter to summarise these pre-conditions for successful collective action.}\]
important and ambiguous explanation among several others for answering the question as to what are the conducive factors for successful collective action. Scholars, while attempting to answer such questions, vary from each other, both theoretically and otherwise, in their explanation of the role played by the nature of the community — in terms of homogeneity and heterogeneity — in achieving success in any attempt for collective action. Broadly speaking, there seems to be at least two schools of thought concerning the nature of community (heterogeneous vs. homogeneous) and its potential for collective action for sustainable management of natural resources. The first believes that homogeneous or small communities are more capable or even a pre-condition for collective action or co-management. The other argues that homogeneity of the community is not a precondition, and instead heterogeneity can even be an instrument of collective action.

2.2.1. Explaining Heterogeneity

Before going further to discuss the positive or negative role played by heterogeneity in local level collective action, it is appropriate to conceptualise the term heterogeneity and mention what are the different types of heterogeneity that carry the potential to affect collective action. Baland and Platteau (1996: 303 - 12) identify three sources of heterogeneity, which may affect the capability or the motivation of resource users to participate in collective action:

First, heterogeneity resulting from cultural divisions such as caste, race and ethnic identity.

Second, heterogeneity originating from inter-village variations in critical endowments such as skills, wealth, etc.

Finally, heterogeneity arising from differential interests of users in the resource and for collective action.

The cultural heterogeneity, arising out of caste and ethnic differentiations, may lead to differential interpretation of norms and often prohibit any effort based on shared norms. The second source of heterogeneity arising out of variations of critical endowments mainly pertains to ‘economic inequality’ of the resource users in a community. Bardhan and Dayton-Johnson identify several variants of economic heterogeneity, such as a) inequality in wealth or income among the members of a resource-user group, b) inequality in the sacrifices (contributions) community
members make in cooperating with commons-management regimes, c) inequalities in the benefits they derive from such regimes, and d) inequalities in outside earning opportunities, which increase the ‘exit options’ (2002: 88).

The differential interests of uses primarily arise because of their differential use of the same resource system. Further, differential use of the resource may also arise owing to factors like one's occupation, position in the caste hierarchy, gender etc. Differential interests in common pool resource pose a problem to successful collective action since it pits different users of the resource against each other. For example, the interests of shepherds, who primarily depend upon forest for grazing their cattle, may come in the way of the interest of the rest of the community, which advocates closure of grazing for regeneration of the forest. In the case of water resource, Meinzen-Dick and Jackson (1996) argue that differential use of the resource based upon gender differentials often pitted the interests of women who needed water for cleaning and cooking against the interests of men whose primary interest in water lay in irrigating cash crops for increasing income.

To these sources of heterogeneity, Vedeld (2000) adds another type of heterogeneity, i.e., ‘political heterogeneity’, which plays a significant role in deciding the possibility of collective action for commons management. Political heterogeneity, Vedeld argues, may significantly affect local efforts since it creates opportunities for conflict among leadership groups leading ultimately to intra-group rivalries.

Having discussed various types of heterogeneity, let me now turn to focus the impact (whether positive or negative) of heterogeneity on commons management outcomes from a review of works done by various scholars on different types of commons.

2.2.2. Heterogeneity as a Favourable Condition

It has been pointed out earlier that scholars tend to divide into two camps in their efforts to analyse the role of heterogeneity in collective action. The scholars who favour heterogeneity to gain collective outcomes mostly derive their argument from the theoretical work of Mancur Olson (1965), who stated that small groups with
considerable inequality have more chance of achieving collective goods. Olson (1965: 34) has explained that:

'in small groups marked by considerable degree of inequality, there is greatest likelihood that collective good will be provided, for the greater the interest in collective good of any single members, the greater the likelihood that that member will get such a significant proportion of the total benefit from the collective good that he will gain from seeing that the good if provided, even if he has to pay all of the cost himself'.

Olson’s proposition suggests that heterogeneity is favourable for successful collective action, since a heterogeneous group may possess certain members whose interest in collective good is comparatively higher than the average members as they gain from the collective good proportionately higher than the rest of the community. Such an argument, which Bardhan and Dayton-Johnson (2002) term as ‘Olson effect’ has been further explained empirically by various scholars working in the area of farmer-managed irrigation systems, where the local elites have taken the responsibility of providing assured and timely irrigation water to the community, from which they gain proportionately higher, compared to other members of the community.

Wade’s pioneering study of farmer-managed irrigation systems in Andhra Pradesh suggests that economic inequality was not necessarily an obstacle to co-management of resources. The South Indian villages studied by Wade are marked by sharp inter-household differences in terms of landholding and wealth. In the Kottapalle village, where Wade conducted his field work, holdings were typically scattered and land owners had a plot close to an irrigation outlet and another plot close to the tail-end of another outlet. For this reason, all land owners had a common interest in establishing and enforcing a system of regulating access to water (1988: 185 – 90). Wade had examined, also, the leadership role played by the village elites, a factor, which was commonly associated with successful collective action and effective co-management of natural resources. He has found that economic inequality

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11 Further advancement to this argument has been done by scholars of critical mass, who argue that a heterogeneous group has more chance of success in collective action, since it possesses a ‘critical mass’ — a pool of highly resourceful and interested individuals — who will provide the collective good for the rest of the community (see, Heckathorn, 1993; Marwell and Oliver, 1993; Marwell et al., 1988; Oliver, 1980 and Oliver et al., 1985).
provided the necessary impetus for playing a suitable leadership role. Since the benefits of co-management of irrigation systems were positively related to land area, the elites had a disproportionately greater interest in effective regulation of water resources. This greater benefits in proportion to their landholdings motivated the elites to take the role of leadership, which in turn, ensured successful collective action (1988: 190). Similarly, Vaidyanathan (1986) has explored the historical importance of local elites in promoting the emergence of irrigation management regimes in India, China and Japan.12

A few more studies have also found evidence of a non-negative role played by heterogeneity of the community. Some of these studies are proven outside the subcontinent. Based on his study in Mali, Vedeld concludes that small size and homogeneous groups were not the general preconditions for greater ability to perform collectively in stratified village society (2000: 125). Vedeld identifies five different sources of heterogeneity, such as,

a) political heterogeneity (disagreement on the legitimacy of the leaders)
b) heterogeneity in endowment (unequal access to land and CPR)
c) heterogeneity in wealth or entitlement (large differentiation in crop production income)
d) heterogeneity in economic interests (diversity in the type of use of CPR)
e) heterogeneity in cultures (large differences in level of education, values and life orientation).

Out of these five sources of heterogeneity, according to Vedeld, heterogeneity among leaders or political heterogeneity was crucial for collective action. In the two villages studied by him, successful collective action was possible only in one due to homogeneous leadership structure despite the presence of other sources of heterogeneity. In the other village, the leaders were heterogeneous along most dimensions. Thus, Vedeld has concluded that homogeneity among leadership and elite groups enhanced the capacity for collective action in a social group even when there was heterogeneity in other respects. Vedeld states ‘a heterogeneous community is capable of finding solutions to the collective action dilemma, as long as there is a

reasonable degree of homogeneity among the leadership group’ (2000: 125). He also adds that capacity for collective action was particularly undermined or at risk when heterogeneity in economic interests between the elite groups intensified and coincided with political, endowment, entitlement and cultural heterogeneity. Collective action is enhanced by political elites and leaders being a bit better endowed (more CPRs or lands) and a bit wealthier than the average community members, since the larger asset owners are likely to benefit more and be willing to take on extra burdens in maintenance and enforcing the regimes (2000: 125 - 26).

Varughese and Ostrom (2001) from their study of 18 forest user groups in Nepal, conclude that heterogeneity was not necessarily a strong predictor of local level collective action. They have identified three sources of heterogeneity, i.e. locational differential, wealth disparity and socio-cultural differentials of the forest user groups. Out of the three sources, the first and the last source of heterogeneity have negligible positive association with collective action, whereas wealth disparity indicated a modest negative relation with the level of collective action. Thus, Varughese and Ostrom argue that heterogeneity is a challenge that can be overcome by crafting innovative institutional arrangements well matched to their local circumstances (2001: 762).

Ostrom and Gardner (1993), from their empirical analysis of several farmer managed irrigation systems in Nepal, also acknowledge that asymmetries (heterogeneities) among the participants of a common pool resource management could present substantial barriers to equitable water distribution among head-end and tail-end farmers. However, these asymmetries, they opine, ‘are frequently overcome in settings where farmers are made aware of their mutual dependencies’ (1993: 109). A clear perception of mutual dependency and assurance of cooperation help a heterogeneous community to succeed in collective action dilemma. Ostrom and Gardner (1993) mention that when the users of a resource expected to relate to one another for a long term basis, such expectations of mutual dependency and assurance of future cooperation became easy and they tended to design rules that lead to higher yields and to a reduction in the asymmetry of results.
Drawing upon a survey of 104 peasant cooperative institutions in Paraguay, Molinas (1998) has found an inverted U shaped relationship between economic heterogeneity and group performance for local level collective action. Molinas mentions that ‘in highly equal communities a coordination problem may arise because nobody has a differentiated incentive to be the committee’s organiser’ (1998: 420). At the same time, a high degree of inequality makes it difficult for committees to organise effectively. Molinas has concluded that a moderate level of inequality was related to high group performance. Contrary to this, Bardhan (2000) presents a model of U shaped relationship between inequality and local level collective action for harvesting in fishery. They argue that collective action can be successful either in low or extreme high level of inequality.

2.2.3. Heterogeneity as an Impeding Condition
Several Scholars have also pointed out the negative role played by group heterogeneity in local level collective action for commons management. Scholars who argue in favour of negative impact of heterogeneity state that the members in a small and homogeneous group have frequent and personalised relationships and thus, consider the more indirect and long-term consequences of their choices instead of immediate costs and benefits. Besides, close and face-to-face nature of these relationships ensures that people are well informed about each other’s actions and preferences. Moreover, in small and homogeneous groups the incentives are more to behave in a group-oriented way (Baland and Platteau, 1996: 298 - 99). Nugent (1993: 624) adds that in smaller and more closed groups the operational costs tend be lower and the ability to observe any free riding by others would be greater.

The advocates of community based resource management, who argue for a homogeneous community for successful resource management, thus, put forward a conceptualisation of the community, which is territorially bounded, small sized and homogeneous in nature. It implies that social inequality and heterogeneity of the community structure is negatively associated with successful resource management by the community. It is in such situations that the problem of free rider pose a severe challenge to successful community management of local resources. The solution, which is put forwarded, is to create homogeneous sub-groups, who have similar interests within a larger village community. Wilson and Thompson, for example, in
their attempt to analyse the break down of 'ejidos' (the pastoral commons) in Mexico argue that, "pastoral management at community level has proved a failure, presumably owing to the excessive size of the group concerned. However, this failure of group management, indeed, has led in a significant number of cases to the formation of grazing-coalitions within smaller groups where cooperation is assured and benefits are enjoyed under severe ecological conditions" (1993: 300). The most effective of these smaller grazing associations are, they claim, based upon the extended family. In the field of irrigation too, available empirical evidence tends to suggest that cooperation for successful management of irrigation systems work better in relatively small groups (Bardhan, 2000: 851). Coward, likewise, points out that "for the purpose of irrigation organisations the critical unit is the 'irrigation community', composed of field neighbours, and not the village community composed of residential neighbours" (Coward, 1980: 208; cited in Wade, 1988: 214). Dayton-Johnson (1999) conducted a study in 49 community managed irrigation systems known as 'unidades de riego' in the central Mexican state of Guanajuato. His study concludes that social heterogeneity is consistently and significantly associated with lower levels of infrastructure maintenance. Inequality in landholding has also a negative effect on maintenance. From his study of 22 community irrigation systems in several countries, Tang (1991) has reached the conclusion that even a slight variance in family income among irrigators tended to be associated with variation in the extent to which rule conformance and good maintenance occurred among the members.

Evidence found elsewhere is valid in Indian sub-continent as well as in regard to the nature and size of the community and the success or otherwise of community management of resources. Easter and Palanisami (1986) from their study of tank irrigation systems in Tamil Nadu confirm that egalitarian social structure and uniform land holding pattern encouraged collective action. The smaller the variation in farm size, the greater the likelihood that farmers would participate in decision making and in the formation of Water Users' Association. Farmers believed that they would get more or less equal benefits and had equal influence on the allocation of water supplies. Likewise, Jayaraman (1981) notes in a study of surface water irrigation projects in Gujarat, that relatively egalitarian structure of the community denoted by size of the landholding and similar interests of members were significant factors influencing the farmers' coming together to form Water Users' Association.
Some other scholars argue some degree of cultural homogeneity, in terms of common set of beliefs and shared norms, is quite conducive for collective action; since it substantially reduces the cost of negotiation and monitoring (Aggarwal, 2000). Shared norms are given priority in collective action, as they tend to combine the user groups, even if they are diversified in several other aspects. Shared norms, in a context of collective action for commons management, form the basis of binding agreements (see Bardhan, 1993b; Ullman-Margailt, 1978).

Quiggin (1993), in his paper on 'Common Property, Equity and Development', also argues the negative role played by group heterogeneity in arriving at a common decision for common property management. He argues that collective decision-making process required for CPR management would work 'if the group of common property owners is relatively homogeneous' (Quiggin, 1993: 1130). Contrarily, diversity with respect to income or in other dimensions limits the likelihood of emergence of a generally accepted pattern of resource use. John Quiggin particularly stresses that 'equality in endowments is essential to the successful management of common property institutions' (1993: 1129; also see Quiggin, 1988). One of the negative impacts of endowment heterogeneity, which Quiggin mentions, is that households with better endowments of land, labour and capital would be at an advantageous position to corner or exploit the benefits of collective action, and therefore, would receive a higher economic return. Platteau and Abraham (2002) also point out such capture of a larger share of benefits from any coordinated action or developmental programme in a heterogeneous community.13

Perhaps, one of the systematic attempts to study the role of heterogeneity and inequality of income distribution in cooperative behaviour for common property management is by Ravi Kanbur (1992). Kanbur makes his argument by a review of

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13 The elites' capture of larger share of benefits from any developmental projects has been recognised now as the major dilemmas of decentralised development, where communities are traditional, hierarchical and heterogeneous in several aspects. Access to critical endowments like land, education and political positions puts the rural elites in a commanding position to take the leadership role on behalf of the community and, thereby, procure more benefits than average members of the community from any developmental project. For such elites' capture in decentralised development, see, Bardhan, 2002; Bardhan and Mookherjee, 1999, 2000; and Platteau and Abraham, 2002.
various scholarly works on common property, which includes works by Alexander (1982), Cordell and McKean (1986), Coward (1979), Hariis (1977), Johnson and Libecap (1982), Ostrom (1990), Schlager (1990), Tang (1992) and Wade (1986). Based on a review of the work of above scholars, Kanbur concludes that ‘greater equity or greater homogeneity promotes greater efficiency in common property management by facilitating the adoption of cooperative agreement’ (1992: 21). He further mentions that the existing agreements for common property management are more likely to breakdown as the community becomes more heterogeneous.

The arguments of homogeneity versus heterogeneity and small versus big notwithstanding, it has now been acknowledged that community plays a significant role in conservation and management of local natural resources. Having recognised such a claim, the question that remains is what makes a community? Or, which type of community that the scholars of community-based natural resource management are talking about. It seems from the arguments from advocates of community-based conservation that a ‘distinct community exists’, which should be made an integral part of resource management activities. Having narrated the revival history of community in general and its role in conservation and management of natural resources, in particular, and having discussed the particular community characteristics that affect — either positively or otherwise — I now move forward to discuss the nature of community that we talk about in community-based conservation.

2.3. Images of the Community

Relatively a few concepts in social science literature have drawn the kind of attention, as has community. And, in the changing circumstances of developmental discourse,
returning back to community has become the order of the day. However, the most obvious notion that are juxtaposed to community in any discussion of it are ‘small, homogeneous, harmonious, territorially fixed, ascribed social units’, having certain common norms, in which there exists face to face interaction. Despite the current writings on community-based conservation assert that community is central to renewable resource management, they, however, seldom devote much attention to analyse the concept of community or to explain precisely how the differential elements of community affect the management outcomes.

Without paying much attention to the internal characteristics of the community, the advocates of community-based conservation put forth the claim that local communities have been existing in harmony with nature and thus, demonstrate enduring patterns of sustainable, equitable and efficient use of the natural resource (Berkes, 1991; Bromley and Cernia, 1989; Korten, 1986; McKay and Acheson, 1987). Even the traditional, collective and inward looking characteristics of Eastern or third world communities have been emphasised to strengthen the claim on behalf of community. To quote Berkes and Farvar:

"... renewed interest in community is partly due to the new-found pride in traditional values and institutions, both in the Third World and in the West. Most cultures — certainly most of those in the Third World countries — emphasise responsibility to the community, rather than the unbridled individualism glorified in some Western industrial cultures. Communalism is an important mode of thinking and of managing resources throughout the world, from nomads of Arabian peninsula to native Amerindian people. It is no accident that traditional resource-management systems are often community-based." (1991: 3-5).

Emphasising the traditional characteristics of communities, the scholars of community-based conservation, often take resort to functionalist anthropological approach, which envisions tradition as comprehensive set of binding rules that exists for the welfare of the whole system (see Li, 1996). They further claim that such rules guarantee livelihood security by providing ‘access to vital natural resources, by members (Etzioni, 1996: 304). In such a circumstance, a responsive community tries to make a perfect balance between the two forces, resulting in the smooth functioning of the community. Also, see, Etzioni, 1968, 1991 for an understanding of the concept ‘responsive community’.
which, everyone in the community is assured of the opportunity to meet their basic needs’ (Berkes and Farvar, 1991: 11).

Further, the advancement of research in game theory also emphasised the small and bounded-ness characteristics of the community. Scholars focusing on repeated games as a theoretical construct to avoid the problems of collective action and free-riding, rely on concepts such as complete information, face-to-face interaction, trust, assurance, reciprocity, etc. which seem to present only on small, egalitarian, homogeneous and territorially fixed communities (see Nugent, 1993; Rasmussen and Meinzen-Dick, 1995; Axelrod, 1981). Such conditions for successful cooperation suggest that successful communities are small and homogeneous enough to pass information among its members, who interact with each other continuously on a face-to-face basis over a longer period of time. Further, trust and reciprocity are prone to exist in the context of small groups, primarily because, ‘pre-play communication, which is obviously easier to achieve when people are few, allows individuals to reveal and signal their intended plans of action and to learn about others’ intentions’ (Platteau and Abraham, 2002: 108).

Much of the literatures on community-based conservation emphasise upon either cultural, — i.e., shared norms, trust, reciprocity, face-to-face interaction — or physical — i.e., smallness in size, territorial fixity, etc. — characteristics of the community. Arun Agrawal sums up these two much emphasised characteristics of the community as 'community - as - shared understanding' and/or 'community - as - social organisation' (see, Agrawal, 1999; Agrawal and Gibson, 1999).

Such a vision of the community as small, integrated entities using locally evolved shared norms and rules to manage resources sustainably and equitably is powerful. It allows for contesting the dominant views, which advocates for either nationalisation or privatisation of natural resources. Based upon such a vision of community, scholars in recent years, have been successful in challenging the previous dominant notions (see Li, 1996) such as: the tragedy of the commons and the inevitability of private property in natural resources (e.g. Berkes, 1991; Acheson, 1989; Bromley and Cernia, 1989), and the perceived ignorance of peasants and superiority of western knowledge, science and management (e.g. Chambers, 1983).
However, by viewing community as a unified organic whole, such an understanding of community fails to capture the differences within communities and ignore how these differences affect resource management outcomes. To quote Agrawal and Gibson:

"it also fails to reflect local politics and strategic interaction within communities as well as the possibility of layered alliances that can span multiple levels of politics" (1999: 633).

In reality, however, almost all communities, including the tribal ones, are divided in itself. Besides the communities being hierarchical and conflict-ridden in nature, the individuals within it are also caught up in over lapping circles of relationship (see Sundar and Jeffery, 1999: 37). For instance, within one village individual may have links with other caste members within and outside the village, with political parties, religious organisations, etc. Certain factors of community - such as caste, race, religion, gender, etc. – may act as dividing lines within community.

Several scholars have countered such mythic view of community, as it is usually (mis)represented in community-conservation debate. Agrawal (1999) finds such static notion of community problematic both at representational and conceptual levels. At the representational level it gave a wrong notion of the community, 'since actual existing communities seldom correspond to the ideal of small, harmonious, cooperative social entities', which the community-conservation debate imagined of community to be. At the conceptual level it is problematic, since it is difficult to draw any direct relationship between the shared understanding of community and its physical characteristics of 'smallness' in size (Agrawal, 1999: 101).

The notion of shared understanding and face-to-face relation that the advocates of community-based conservation portray are also criticised in several ways. Shared understanding, unanimity, homogeneity is as much a part of community as divergent opinions, differences and heterogeneity. To quote Sabean, "what matters is not that villagers share the same views, but that they share a language in which those views can be discussed and disagreements can be sorted out" (Sabean, 1988: 28; cited in Sundar and Jeffery, 1999: 37). It is the negotiation of differential opinions among the members of community, which is important from community-based
conservation point of view, rather than shared understanding itself. Further, the smallness of a community also does not ensure that its members will interact automatically and will share a common understanding. Shared understanding always requires negotiation, renegotiation and frequent interaction among the members who are prone to hold differential opinions. And such interaction does not occur automatically, rather it requires some mediation, may be in the form of 'language, expression, telephone, computer, touch, sight, or hearing (Agrawal, 1999: 104). 'Both face-to-face and non face-to-face interactions', Young (1990: 314) points out, 'are mediated relations and in both there is separation and miscommunication as there is consensus and communication (cited in, Agrawal, 1999: 104).

2.4. Gaps in the literature and the Research Question

Situations requiring collective action may take several forms, one of which is the system of managing Common Pool Natural Resources, such as fisheries, forests and tank irrigation management. However, the present research tries to locate collective action in the case of co-management of forests, and more specifically in the Joint Forest Management programme in Orissa.

The extensive review of relevant literature carried out in two chapters indicates several gaps in the research pertaining to our understanding of 'community' and its role in conservation and management of natural resources. To begin with, the notion of community, as it is portrayed in community-conservation literature as a simple, homogeneous and unified whole with shared understanding, is misleading. Such an a priori understanding of community leads scholars to come up with a biased finding that homogeneous communities are only suitable for collective action for local resource management. And this further neglects the efforts of heterogeneous communities to succeed in conservation activities.

A few questions may be raised in this regard. Communities do not always remain homogeneous or does one find them be thus. Given the process of social and economic change during the past 3-5 decades, different groups within a community have responded varyingly to the source of such changes. And the already existing heterogeneity, in terms of social differentials of caste, clan or tribe, has reproduced
itself in other spheres of activities. How, then, does one expect collective action to succeed in such communities?

An acknowledgement of the internal differentiations in the community engaged in conservation of natural resources forces us to face several challenges. Since the present research aims to explore the community's involvement in the case of forest resource, it is necessary to primarily pose the questions in the context of community-based forest management. Indifference of scholars towards the internal divisions of the community has resulted in lesser attention being paid to the question as to how such internal differentiations affect the management outcomes. Therefore, an attempt has been made to answer a set of questions, such as how joint management of forest takes shape in a stratified community; in what way the social differences such as caste, class and differences in land ownership affect the forest management outcomes; whether the management outcomes fulfill the desired interests of all the sections of community or is it being influenced by a particular section of the community; what is the nature of the community engaged in the joint management of forests and how does this affect the management; from which section does the leadership come; how the does the leaders manage to keep the balance between different interests of different sections of society; etc.

A mere statement that heterogeneity has either positive or negative impact on local level collective action, as has been the case with community-based conservation literature, is not justifiable. On several accounts and through diverse sources, the communities are heterogeneous, and the need to mobilise these differences for resource management remains a challenge. Even though the communities are heterogeneous for several reasons, collective action for local resource management requires crafting of institutions and rules of access and use, to which the members of the community should exhibit consensus and comply with those rules collectively. What is interesting to note in such circumstances is how do the challenges that heterogeneity poses are overcome and consensus is built for crafting rules for resource management. Or, in other words, the question that arises now is how do such differences are negotiated and mediated with respect to, first, formulation of rules for resource management, second, compliance of such rules, and third, monitor the violation of such rules and provide for some kind of punishment for rule breakers.
How do such heterogeneous communities mobilise diverse groups, diverse opinions and diverse interests to manage their resources, which becomes the major thrust of the present research.

Since the research tries to explore the nature of the community and its involvement in the forestry activities in Orissa, the dissertation also makes an attempt to study the nature, evolution and functioning of Joint Forest Management of Orissa. A journey to the history of several forest enactments and policies concerning forestry in Orissa becomes an essential part of the thesis to explore the historical evolution of people’s participation in forest conservation and management activities, finally culminating in Joint Forest Management programme.

### 2.5. Objectives

This research primarily aims to explore the relationship between group heterogeneity and local level collective action for management of local forest resources. In the course of inquiry, the thesis makes an attempt to illustrate the factors and processes that mobilise the differential interests and heterogeneous aspects of the community and lead it towards a consensus in managing local forest resources through Joint Forest Management Programme of Government of Orissa.

The specific objectives of the dissertation are as follows:

- To historically analyse the process of people’s participation in forest management finally culminating in Joint Forest Management in Orissa
- To examine the role of heterogeneity upon the pattern of dependency on forest and upon the management outcomes
- To explore the process of collective action for forest management in a heterogeneous community
- To explore the factors and processes that mobilise differential interests, overcome problems of heterogeneity and sustain collective action in a heterogeneous community
2.6. Methodology

2.6.1. The Research Design
The major thrust of the present research lies in exploring the factors that help sustaining collective action in a heterogeneous social setting and to observe how such heterogeneous aspects are mobilised to bring a consensus with regard to rule formulation, rule compliance and monitoring rule violation. The study is exploratory in nature. The empirical work for the study was carried out in two heterogeneous village communities in Dhenkanal district of Orissa. Out of those, one has been successful in managing its local forest resource through the Joint Forest Management Programme of Government of Orissa, and the other has been a failure in its attempt to do so. While the successful village has a one decade plus history of forest conservation and management till the period when the field work was done, the failure village was able to sustain its institution of Village Forest Protection Committee only for five years — after which the institution as well as the attempt to conserve forest broke down — making only a five year history in forest protection. The reason behind such a selection was to facilitate the inquiry as to how one village became successful in forest resource management, despite the fact that both were heterogeneous in nature. And second, what factors and processes were present in the successful village, which helped the community in negotiating the differences to bring a consensus for local forest management.

2.6.2. Selection of the Study Area
The empirical work for the research was carried out in Orissa. Forests cover nearly 37 per cent of the total geographical area of Orissa, spreading over 57,167 sq. Kms. throughout the 28 Forest divisions in the state (Directorate of Forests and Environment, Government of Orissa, 1997). The total percentage of forest cover is comparatively high than that of India, which is 19.45 per cent. The state ranks fourth in terms of forest area in India (Madhya Pradesh, Arunachal Pradesh and Andhra Pradesh being the first three states having 135,164; 68,621 and 147,112 sq. kms. of forest cover respectively; see, Forest Survey of India, 1997).

The State of Orissa was taken for the purpose of the study as community's involvement in conservation and management of local forest resources through locally
evolved institutions is very much prominent in rural Orissa. Such community involvement in forestry activities has been structured by both community-initiated institutions as well as by state sponsored institutions through the Joint Forest Management Programme. Whether initiated by the community itself or created through government initiation, a fact, which is clear for Orissa's forestry activities, is that 'the community has played a significant role in protecting and conserving local forest resources since long'. Out of the total forest area, 11,098 sq. kms. (93,859 Ha.) have been successfully managed by 1060 VSSs (Vana Samrakshyana Samiti, the official forest protection committee created through JFM programme) throughout the state as of January 1997 (Ori Forest, 1997). Orissa is the third state in India so far as forest area managed by JFM is concerned, (M.P, Andhra Pradesh being first and second in the order, having 38,468 and 15,243 sq. kms. under JFM respectively, see, Wastelands News, 15 (1): 67). Besides, the community management of forests has a long history in Orissa, even though the state government passed the JFM resolution giving the people a share in the management only in 1993. As per the data available, Community Forest Management is practised in 15 districts of Orissa, where 5,402 self-initiated village Forest Protection Committees are protecting 3,09,750 Ha. of forest land on their own.

In the state of Orissa, the district of Dhenkanal was chosen for empirical work. Community’s involvement in conservation and management of forest resources has a long history in the district, dating back to the Prajameli (Peoples’ Revolution) of 1937, when the local people agitated against the then colonial state for complete rights over forest resources and abolition of forest tax (see, Mahapatra, 1999: 36). Secondly, the social composition of the district is heterogeneous in nature as people of several castes as well as tribes live in it. Besides, both community-initiated and state-sponsored institutions have structured the community’s involvement in forest protection in the district. The following paragraphs give the numerical data pertaining to the functioning of JFM and CFM — Community Forest Management, through locally evolved/initiated institutions — in the district.

The Dhenkanal district, which also constitutes a Forest Division — one among 28 administrative units or Forest Divisions of Forest Department of the state — consists of five Forest Ranges, namely, i) Sarangi, ii) Kamakshya Nagar (East), iii)
Dhenkanal, iv) Kamakshya Nagar (West) and v) Hindol. There are, in total, 162 VSSs functioning in all the 5 Ranges of the Division as on 15th March 2000. There are 18 VSSs in Sarangi Range, 51 VSSs in Kamakshya Nagar (East) Range, 50 VSSs in Kamakshya Nagar (West) Range, 24 VSSs in Dhenkanal Range and 19 VSSs in the Hindol Range.

In the Dhenkanal district, there are in all 732 self-initiated village Forest Protection Committees protecting forests of their own. The villages involved in CFM have come together in recent years to form a federation of Village Forest Committees in the district. There is a apex Zilla Committee at the district level, which is further divided into 8 Block Committees. The 8 Block Committees of Community Forest Management in Dhenkanal District are i) Dhenkanal Sadar Committee, ii) Gondia Block Committee, iii) Odapada Block Committee, iv) Hindol Block Committee, v) Kamakshya Nagar Block Committee, vi) Bhuban Block Committee, vii) Parjang Block Committee and viii) Kankada Hada Block Committee. Each Block Committee is further divided into several Cluster Committees. There are in all 43 Cluster Committees in the district, which falls under eight Block Committees. The Cluster Committee comprises of several Village Forest Protection Committees in the locality. Thus, the 732 Village Committees are further grouped into 43 Cluster Committees, which further constitute eight Block Committees, and these eight Block Committees are combined together to form the Dhenkanal Zilla CFM Committee. The Zilla Committees of several districts have also joined together to form the apex state committee, which is known as Orissa Jangal Manch or Orissa Forest Forum.15

2.6.3. Selection of the Villages (Sampling Procedure)

To study the underlying factors that help sustain collective action in heterogeneous communities, it was decided to take two village communities for an in-depth study: one where collective action is successful and the other where it is a failure. Besides the above-mentioned basic criterion, the following additional criteria were identified for selection of the villages:

- The social fabric of the villages should be heterogeneous in terms of caste, economic rewards, landholdings, use of the resources, etc.
- The villages should be proximate to the forest (in between 0 to 5 KMs)

15 For details regarding institutional arrangements of Community Forest Management in Orissa, See, Mahapatra, 1999.
The villagers should be dependent on the forest

The two study villages were chosen following a two stage sampling procedure. First, a quick survey of 10 villages was made, which were selected randomly, in the Dhenkanal Sadar Block of Dhenkanal district of Orissa. Brief information regarding social composition of the members of the village community, their past history of forest protection, and their degree of success in collective action in designing institutions for effective management of local forest resources were collected. In each village, during the short visit, the president of the village forest protection committee, the headman of the village, a few elites and the common villagers whom the researcher came across were contacted and interviewed.

To gauge the relative success of the villages in collective action, the existence of village level institutions to design rules of access and use was taken into consideration. The performance of villages in collective action was further divided into three categories: None/Low – no local institution existing currently for forest protection or the institution had collapsed, rules were not complied, monitoring was not done. Moderate – local institution for forest protection existed, rules were followed, monitoring was done to catch rule breakers, but not strong enough to restrict the members of outside community. High – rules were followed, strong monitoring system existed to catch rule breakers from both inside the community and outside.

Social differentiation, in terms of caste and tribe were taken into account to decide the heterogeneous status of the village. The villages, which comprised a single caste or tribe were leveled as homogeneous at the first instance. Though it is an accepted fact that those villages may have been heterogeneous in several other respects, however, to distinguish these villages from the rest, which comprised members belonging to several castes and/tribes, they were considered as homogeneous, and were kept out. Further, it was not feasible from the short survey to highlight the other sources of heterogeneity of the villages. Therefore, in the first stage of the survey the villages having single caste/tribe were leveled as homogeneous and vice-versa.
A brief analysis of the survey was done to choose two villages for an in-depth study based upon their success or failure of collective action. The analysis can be briefly summarised in the following table.

Table 2.1: A Quick Survey Report on the Ten Villages

<table>
<thead>
<tr>
<th>Name of the Villages</th>
<th>Social composition</th>
<th>Since when protecting</th>
<th>Collective action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gandadhar Prasad</td>
<td>Heterogeneous</td>
<td>16 years</td>
<td>High</td>
</tr>
<tr>
<td>Jhankira</td>
<td>Heterogeneous</td>
<td>40 years</td>
<td>High</td>
</tr>
<tr>
<td>Biradia</td>
<td>Heterogeneous</td>
<td>1993 - 98</td>
<td>None</td>
</tr>
<tr>
<td>Ambanali</td>
<td>Heterogeneous</td>
<td>1993 - 98</td>
<td>None</td>
</tr>
<tr>
<td>Kadua</td>
<td>Homogeneous</td>
<td>1993 - 98</td>
<td>None</td>
</tr>
<tr>
<td><strong>Krushna Kumar Pur (K.K Pur)</strong></td>
<td>Heterogeneous</td>
<td>1993 - 98</td>
<td>None</td>
</tr>
<tr>
<td>Nagiapasi (NP)</td>
<td>Heterogeneous</td>
<td>10 years</td>
<td>High</td>
</tr>
<tr>
<td>Korian</td>
<td>Heterogeneous</td>
<td>5 years</td>
<td>Moderate</td>
</tr>
<tr>
<td>Krushna Prashad</td>
<td>Heterogeneous</td>
<td>15 years</td>
<td>High</td>
</tr>
<tr>
<td>Padmalav Pur</td>
<td>Heterogeneous</td>
<td>15 years</td>
<td>Moderate</td>
</tr>
</tbody>
</table>

As was mentioned earlier, the villages were divided into three categories based upon their relative success in forest conservation activities. The following paragraphs describe such categories briefly.

**i) High Degree of Rule Compliance and Strong Monitoring System:** Out of the ten villages taken for the quick survey in the first round, rules compliance and the monitoring system to punish the rule breakers were found to be strong in four villages, namely, Gangadhar Prasad (G. Prasad), Jhankira, Nagiapasi (N. Pasi), and Krushna Prasad (K. Prasad). All these four villages were heterogeneous in nature, constituting members from several castes and tribes.

These four villages were successful in crafting local institutions, which could design rules regulating the access and use of the forest produces. And such rules were backed by a strong monitoring system, which also included assigning punishments to those who failed to comply with the rules. In three cases, such as in G. Prasad, Jhankira, and N. Pasi, the rules were written down in a register, below which the heads of the households of the villages had put their signatures or thumb impressions.
It made the point clear that rules that were created for regulating the access and use of the forest in these villages were well circulated and the members of the communities were all aware of them.

The village G. Prasad was found to be protecting its Village Forest of 177 acres since 1985 – 86, and now the village institution is a JFM Committee. In the early 1980s, the village forest of G. Prasad was completely deserted and the forestland was just like a barren hill track. Since that was a ‘Village Forest’ as per the legal classifications, the state Forest Department had taken little efforts towards its regeneration. Then, in mid 1980s, the villagers decided to regenerate the forest and stopped allowing grazing inside the forest area. Later, the villagers undertook a massive plantation programme and now the forest stands looking evergreen. Similarly, the Jhankira village was also engaged in protecting its village forest for the last 40 years. This village had the longest history of forest protection from among the ten villages taken for quick survey, where the protection activity started in the 1960s. Compared to these two villages, where protection activity had been carried out in the Village Forest areas, the village N. Pasi and K. Prasad had taken the responsibility of protecting Reserved Forests attached to their village through JFM programme. The Reserved Forests of these two villages were highly degraded prior to the protection by the communities, and with active efforts by these two villages the protected patch had grown into thick forest during the time of fieldwork.

Protecting the forest from the free-riders, who violate the rules for personal gain without contributing towards its protection, is definitely a challenging task before any community aiming to protect a forest patch. And the problem becomes more serious when the free-rider belongs to another community. However, these four villages had been successful in prohibiting both insiders and outside members of the community from breaking rules created for forest protection. This was possible because of the personal efforts that these community members had taken to patrol the forest areas during night times. All the four villages had developed a rotation system, and accordingly, the responsibility of guarding forest was shared among the households of the communities. Currently, N. Pasi and G. Prasad have appointed a permanent forest guard from inside the village, whose responsibility is to check the illegal entrance into the forest.

81
These four villages were categorised as 'High Collective Action' communities since, local institutions existed for making rules for forest protection; rules were obeyed by the members of the community; and finally a strong monitoring system existed to find out both insiders and outsiders, who tried to violate the rules.

ii) Strong Rules with a Weak Monitoring System: Korian and Padma Lav Pur (P.L. Pur) were the two villages, among the ten, where there also existed local institutions with strong rules for forest protection. Both the villages were heterogeneous, in terms of their caste composition, with a preponderance of Tribals in the P.L Pur village. In the other village, the social composition included households belonging to several castes and a few tribal households.

The efforts towards collective action for forest protection are a relatively new phenomenon in the Korian village, which started forest protection in the mid 1990s. In the last five years, the village has been successful in crafting an efficient institution, which could come out with strong rules for forest regeneration. The members of the community also found to be very much sincere in complying the rules. However, the village institution was not able to develop monitoring systems to restrict the free-riders, mostly members of outside community. The forest guards, that the Korian Forest Protection Committee has appointed, have been able to minimize the occurrences of free riding by members belonging to their own community. However, the institution has not been successful in prohibiting members from neighbouring villages from accessing the resource and using the forest without contributing anything. In other words, the community has been facing challenges to establish a common property regime inside the forest, since members from other communities continue to access the forest, without paying anything for their use of the resource. Similar has been the case with P.L Pur village. Although the P.L Pur Forest Protection Committee has been able to design strong rules for forest protection and induce its members to comply with those rules, monitoring has been a problem, especially with the outside free riders. With their 15 years efforts in protection, the forest area has regenerated substantially, which has become an attraction in the recent years for outside non-members to free ride. However, monitoring the action of these outside non-members has not been successful in P.L. Pur village.
These two villages were categorized as ‘Moderate Collective Action’ villages, since the communities were not successful enough in establishing a complete common property regime inside their protected patch of forest, even though Forest Protection Committees and strong protection rules.

**iii) Non-existence of Institutions:** In the remaining four communities, namely, Biradaia, Ambanali, Kadua and Krushna Kuamr Pur (K.K Pur), no local institution was found which could design rules for forest protection. In fact, all these four communities belonged to one revenue village of Krushna Kumar Pur. Even though, for the government records, these four were different hamlets of one single village, yet the four communities were separate social entities having their own jajmani system, around with the village economy/society revolved. The hamlet Kadua was a completely Scheduled Tribes settlement, with ‘Sabar’ and ‘Juanga’ tribes inhabiting in it. The rest three were heterogeneous so far as their social composition is concerned.

All the four communities started protection activities separately in the forest patches adjoining their hamlets in the year 1993. Initially, the original K.K. Pur hamlet started the protection activity and inspired by its efforts, the other three hamlets also established a Forest Protection Committee in their hamlets. However, in the four communities the institutions created were not capable enough in bringing out strong rules for regulating the members’ activities concerning forest use. Whatever rules the institutions created in the beginning, they were not followed strictly. Kadua was the first hamlet where such institution became defunct due to non-conformity of rules and non-existence of a monitoring system. Gradually, the remaining three also followed the same path and within five years, the Village Forest Protection Committee in these four hamlets had become non-existent, and along with it the efforts towards forest protection.

These four communities were categorized under ‘No Collective Action’ category, since these communities failed to establish a common property regime in the forest and did not continue their efforts for forest protection.
After analysing the relative success of the ten villages in collective action for forest protection and categorising them into None, Moderate and High, in the second stage two villages were chosen keeping in mind the earlier mentioned criterion of success and failure.

Thus, two village communities, namely, Nagiapasi and K.K Pur were finally taken for the detailed case study. The village Nagiapasi was taken since collective action for forest protection and management was successful in this village. At the time, when the fieldwork was conducted, the village had a strong and efficient Forest Protection Committee functioning to regulate people’s access and use of the forest resource in the village. The Forest Protection Committee was started in the village in the early 1990s and is still functioning. Besides being a successful village in its efforts for forest protection, there was an additional reason for choosing Nagiapasi village. Since one of the objectives of the dissertation is to study the history and working of JFM in the state, Nagiapasi village was chosen, which had registered itself with state the JFM programme. The second village chosen for the detailed study was K.K Pur. K.K Pur was the failure village, and the village had only 5 years’ history of forest protection.

2.6.4. Method and Tools Used for the Collection of Data

The fieldwork was carried out in two phases during the year 2001. In the first phase of the fieldwork, the survey of ten villages was undertaken and the two villages, i.e., Nagiapasi and K.K. Pur were identified for a detailed field study. The second phase involved a detailed observation of the two villages for a period of three months, i.e., from September to November in the year 2001.

A combination of participant observation, interview and focused group discussion methods were used to elicit the relevant data from the two chosen villages. A common interview guide was followed for both the villages while collecting the required informations from the villages. Besides the socio-economic profile of the households in the two villages, data pertaining to their dependency upon forest, type of use and access into forest, efforts to initiate the protection measures, and the overall history of collective action in the two villages were collected.
During the period of the stay in the villages for fieldwork, the evening hours were spent in different village common rooms, where the villagers usually get together to play cards or to gossip. Several rounds of discussions were made with the villagers at these common rooms to understand the overall environment of the village, the internal politics of the village and the perceptions of the villagers towards access, use, dependency and efforts to protect the local forest resources.

There existed several village common rooms in these two villages. Such common rooms were called Kotha Gharas in the local language. The right to access these Kotha Gharas was found to be caste specific in Nagiapasi village, since specific caste groups had their own Kotha Gharas. For example, the SCs and STs did not go the Kotha Ghara belonging to the upper castes. In the Nagiapasi village, four such Kotha Ghara existed, while in K.K Pur, there was only one Kotha Ghar. The Kotha Gharas in Nagiapasi were quite old. The common rooms meant for SCs and STs in this village were Kachha buildings made up of mud and thatched roof, while the other two, meant for upper caste households were semi-pakka buildings made up of stones with tile roofs. However, the K.K Pur common room was relatively a new building, a pakka one, constructed outside the village settlement and was usually dominated by persons belonging to upper castes. Interestingly the SCs and STs were not prohibited from entering that common room.