STUDY OF COMMUNICATION IN JOINT FOREST MANAGEMENT IN INDIA

by

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ABSTRACT

Joint Forest Management (JFM) - i.e. forests jointly managed by the Forest Department and local community - has been operative across all States of India for more than two decades now. Despite its successes in expanding to over one third of the forest area, challenges in managing the forest jointly exist between these two unequal partners. Apart from issues of governance, the lack of communication between them has been reason for many of the on-going conflicts and issues.

The present study explores the communication mechanisms in current practices in JFM, their effectiveness and challenges. The perception of community and the Forest Department about communication challenges, emerging technology, and possible solutions are also explored. A model is developed to help practitioners and planners to assess communication situation and to design appropriate mechanisms.

To study the communication challenges and their relation to power and technology, I surveyed three village communities, and interviewed a range of Forest Department officers from Gujarat. I also surveyed senior Indian Forest Service officers from 19 States to understand their perception of the communication challenges. This data helped me to develop a model to understand communication in a culturally embedded governance situation.

Results of the study indicate the lack of adequate mechanisms to understand the governance-communication linkages with consequential silhouetted approaches that fail to consider the impacts and linkages. The proposed model suggests that communication in governance should be planned taking into account ‘skillholders’ from ‘civil experts’ and ‘conventional experts’ across a variety of stages and dimensions.

While community depends on the Forest Department for information and legitimacy for its various activities, the Department’s approach has been haphazard and ambiguous leaving much improvement to be desired. Senior forest officers acknowledge the situation and suggest a number of solutions for improving communication, which ranges from improved relationships to delivery mechanism. The research suggests that there is too much focus on certain areas for communication, such as policy implementation, without adequate emphasis on the process of policy making, leading to lack of clarity on a number of processes and procedures.
PREFACE

This dissertation is an original intellectual product of the author, Ajith Chandran. The initial exploratory field work for the research in India was conducted with support from the International Foundation for Sciences (IFS), Stockholm for an international collaboration with Centre for International Forestry Research (CIFOR) for a Poverty and Environmental Network (PEN) research.

Ajith Chandran identified the research problem, methodologies and research design (Chapters 1 and 2) with guidance from his University supervisory committee, Dr. John L Innes, Professor and Dean at the Faculty of Forestry, University of British Columbia, Dr. Ronald Trosper, Head of the American Indian Studies Program, University of Arizona and Dr. Michael Meitner, Associate Professor at the Faculty of Forestry, University of British Columbia.

The questionnaire design for Chapters 3 and 4 was done primarily by Ajith Chandran with suggestions from his University supervisory committee. Questionnaire for Chapter 3 (Village community) also had inputs from Joint Forest Management Committee (JFMC) leaders of the three research villages adopted for community survey. Questionnaire on Chapter 4 (Forest Department) had extensive support from Dr. Innes for the content, and from Dr. Jorma Neuvonen, Director Special Projects, Faculty of Forestry, University of British Columbia, for administrating the survey to senior Indian Forest Service officers. Dr. Innes also reviewed and edited all my chapters. Dr. Ronald Trosper introduced me to authors Margaret Archer and Bruno Latour, whose theories form the basis for my Communication-Governance model detailed in Chapter 6. He also suggested the addition of a section on the cultural change in forestry in India. Dr. Meitner advised me on using the interviews with the local Forest Department officers and the community leaders to explore solutions to issues and presentation of data in Chapters 3 and 4. Drs. Trosper and Meitner also reviewed my thesis.

Chapter 4 (Forest Department) was presented at the International Union of Forest Research Organisations (IUFRO) Conference held in October 2014 at Salt Lake City, Utah, USA. Chapter 6 (Communication-Governance Model) was presented at the Institute of Asian Research, University of British Columbia in February 2014 and at the Indian Institute of Forest Management, Bhopal, India in October 2015.

This research was approved by the UBC’s Behavioural Research Ethics Board (Certificate Number H11-01764)
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LIST OF ABBREVIATIONS, LOCAL WORDS AND SPECIAL WORDS

Abbreviations

AKDN: Aga Khan Development Network
AKFI: Aga Khan Foundation-India
AKRSP: Aga Khan Rural Support Programme-India
BCRLIP: Biodiversity Conservation and Rural Livelihood Improvement Project
BREB: Behavioural Research and Ethics Board
CBNRM: Community Based Natural Resource Management
CIFOR: Centre for International Forestry Research
CSWCRTI: Central Soil and Water Conservation Research and Training Institute
DGSS: Dasholi Gram Swarajya Sangh
DLWG: Divisional Level Working Groups
DRDA: District Rural Development Agency
FDA: Forest Development Agency
FES: Foundation for Ecological Security
FLCS: Forest Labour Cooperative Society
FRA: Forest Rights Act
GBM: General Body Meeting
GEER Foundation: Gujarat Ecological Education and Research Foundation
GVM: Gram Vikas Mandal
HRMS: Hill Resource Management Society
IAS: Indian Administrative Service
IFS: Indian Forest Service
IPS: Indian Police Service
IWDP: Integrated Wasteland Development Programme
JFM Cell: Joint Forest Management Cell
JFM: Joint Forest Management
JFMC: Joint Forest Management Committee
MoEF: Ministry of Environment and Forests
MoTA: Ministry of Tribal Affairs
NAEB: National Afforestation and Eco-development Board
NAF: National Afforestation Programme
NGOs: Non-Governmental Organisations
NTGCF: National Tree Growers Cooperative Federation
NWDB: National Wasteland Development Board
PEN: Poverty and Environment Network
PRA: Participatory Rural Appraisal
PRI: Panchayati Raj Institution
RFO: Range Forest Officer
SHT: Spear Head Team
SLWG: State Level Working Group
SPWD: Society for Promotion of Wasteland Development
UBC: University of British Columbia
VKS: Van Kalyan Samiti
VLO: Village Level Organisation
VVS: Van Vikas Samiti

Local words

adhikar patra: Record of Rights.
agni purana: one of the ancient Hindu scriptures
anganwadi: child care centre
ayurveda: ancient Hindu medical practice

bhajan mandali: religious groups

chipko andolan: the embrace movement

e-samadhan: e-solution

gram sabhas: village body consisting of all adult members

Gram Vikas Mandal: Village Development Body

mahajan: money lender

mahila mandal: women’s group

mamlatdar: executive officer in charge of a taluka

melas: fairs

padyatra: journey by feet

panchayat: elected self-government institution of a village or few villages

panchayat bhawans: panchayat offices

Panchayati Raj: the political system of elected local self-government in India

taluka: smaller administrative unit under the District

tehsil: smaller administrative unit under the District (another name for taluka)

Van Kalyan Samiti: Forest Welfare Committee

Van Vikas Samiti: Forest Development Committee

ujjamani: traditional village meetings

Special words

Skillholders: individuals with skills

Conventional experts: individuals with skills recognised due to their accredited qualifications

Civil experts: individuals with skills that are recognised by and exist in traditional societies and communities
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DEDICATION

This thesis is dedicated to my parents for their everlasting affection, support and encouragement for higher learning.
“Be like a garland maker, O King; not like a charcoal burner.”

Mahabharata, 12.72.20

The Garland Making Worldview

“This famous statement from the Mahabharata, an ancient Indian epic, contrasts two worldviews. It asks the king to preserve and protect diversity, in a coherent way. The metaphor used is that of a garland, in which flowers of many colours and forms are strung together for a pleasing effect. The contrast is given against charcoal, which is the result of burning all kinds of wood and reducing diversity to homogeneous dead matter. The charcoal burner is reductionist and destroys diversity, whereas the garland maker celebrates diversity.”

(Interpreted by Malhotra 2011)
CHAPTER 1: COMMUNICATION IN FOREST MANAGEMENT

1.1 Introduction

Prior to the introduction of community forestry, government Forest Departments in India were primarily concerned with the management of trees. The involvement of communities in the management of forests has added and diversified the objectives to include social and economic well-being of the local community, along with the prevailing objectives of the scientific management of trees. In this context, formal and informal communications between communities and Forest Departments have become a very important, and often crucial, component for the success of community-based forest management. Both in the community and the Forest Department, formal and informal institutions impact decisions related to forest management. This has made the subject of communication a difficult and rather poorly understood area in community forests. My thesis explores the concept of communication in this context of Joint Forest Management (JFM) in India.

JFM in India is a form of community forestry where the Forest Department and the community have an agreement to protect forests and share the benefits from the forest. In India the JFM program is spread across all 29 states with 106,482 JFM Committees (JFMCs) covering an estimated 8.3 million families and 22 million hectares of forest land (MoEF & MoTA 2010). JFMCs are the village level institutions that manage forests, governed by an Executive Committee (EC). In many countries, community forestry programmes have developed to involve the community and other stakeholders in the management of local forests for a number of benefits (Durst et al. 2005). These communities are not only involved with activities of local importance, such as livelihoods and economic development, but also include activities of regional and global importance, such as payments for environmental services and carbon credits (Wiersum 2009). While many studies attribute the success of these initiatives to good governance and institutions, when issues of conflict or breakdowns happen, a lack of communication is often mentioned as the prime cause (Armitage et al. 2009; Krishna & Mehra 2002; Chandran & Pastala 1998). Despite communication being recognised as an important reason for
governance failures, there are few systematic studies in forestry that deconstruct communication at different levels and put together perceptions across a range of actors for a common understanding. This research is a step in that direction.

I attempt to deconstruct the communication process by using the frameworks of “morphogenetic sequence” of Margaret Archer and Bruno Latour’s “new constitution” (Archer 1995; Latour 2004). I try to identify the roles of power, culture and technology in the context of forest management between two unequal entities - a bureaucratic organisation and a community institution.

In my research, I try to identify the systemic issues at different levels of the organisation in the Forest Department. I use the term “Forest Department” to mean departments in charge of forestry both at the national level, the Ministry of Environment and Forest (MoEF), and state level forest departments, unless specifically mentioned. To get an in-depth understanding of the complexities of communication that are both individual and organisational, I studied the perceptions of village communities, Forest Department officials and NGO workers. A framework to understand the situation and help in identifying and improving it is also suggested.

The field research is primarily based in India using surveys of three village communities in the state of Gujarat. In addition, the study extends to interviews across the hierarchy of the state Forest Department in Gujarat and a survey of senior forest officers across India.

In this introductory chapter, I briefly outline the communication challenges in community forestry. This is followed by a section on theories that help deconstruct communication for the purposes of this research and the reason to use these theories to understand the concepts of power, culture and technology.

1.2 Communication challenges: Local, national and international perspectives
Challenges to communication in forest management not only exist at the local level, i.e. at the interface of community and Forest Department officials, but also at levels of regional, national and international planning and policy making. These challenges manifest in various ways creating bottlenecks and hampering effective forest
management. The following sections look at the role of communication in forest management in these different contexts.

1.2.1 Issues arising due to lack of communication
Communication is a necessary component of management paradigms. In forest management, communication between government Forest Departments and local communities has become increasingly important. A lack of communication undermines the ability of a Forest Department to orient for co-management as plans and policies are built upon poor understanding and information (Matta et al. 2005). Communication in forest management however has remained largely a function of conveying the government’s (or industry’s) messages and information to the community. While this situation continues in many countries (Janse 2005; Durst et al. 2005), the development of community forestry programmes has necessitated a more participatory approach to forest management. This requires a shift in the way that Forest Departments communicate with communities and how communities communicate with the departments. However, this shift has been sporadic and inconsistent due to varying perceptions of communication, both by the departments and the communities (Aasetre 2006) and the lack of institutionalized mechanisms (Chandran & Pastala 1998). The issue is compounded by the vast institutional and cultural differences that tend to exist between forestry departments and local communities. Failures of communication are not only attributed to lack of terms, indicators, and measures from the ecological sciences, but are also associated with differences in important social values (Norton 1998; Brunson 1992).

1.2.2 Managing forests in harmony with traditional values
Practitioners of development communication (use of communication to assist social development) are divided into those who view communication as an organisational delivery system and those who view communication more broadly and consider it inseparable from culture and from all facets of social change (Melkote & Steeves 2001). Increasingly, forest management is becoming not only a tool for efficient resource extraction but also an opportunity for indigenous communities (for example in Canada) to manage forests in harmony with their traditional values and
aspirations (O’Flaherty et al. 2008; Tsleil-Waututh Nation 2009; Sliammon Natural Resources Committee 2005). However, this requires a much closer understanding between the communities and the respective forestry departments. Further, co-management needs to be seen as a joint administration of living resources with levels of management from informing and consultation to a degree of power sharing between local and government resource users (Berkes et al. 1991). A necessary condition for successful co-management is having a means of transparency and communication between users, representatives and state managers about decision-making and management processes (Goetze 2004). Quite often, developing countries (such as India) not only have generic rules for diverse ecological zones, thus grappling with the variables that are required for effective forest management, but they also fail to draw upon local knowledge for policy formulation that would have helped identify solutions for specific locations or problems (Agrawal & Ostrom 2001). Meanwhile governments are recognizing the need to have effective communication with communities to initiate local solutions, even for emerging global issues such as climate change (Moser 2006). Unfortunately, current understanding of communication effectiveness and the mechanisms that exist within the forest management sector are either unclear or inadequate (Parrotta & Campos Arce 2003; Aasetre 2006). A better understanding of communication challenges in the forestry sector would be of considerable use to government and community forest managers, especially due to the long-term involvement and association required between various stakeholders in forest management.

With forest management increasingly changing from timber management by centralized bureaucracies to decentralized participatory management for multiple values with the community, a whole new paradigm is becoming apparent (Carter & Gronow 2005). International agencies and central governments have funded and supported social forestry and community forestry with a community focus. These have quite often been managed using centralized forest management strategies and based on the long-held values of the Forest Department, with a focus on the scientific or economic aspects of timber management. In most cases, the importance of improving the forest stock for ecological, economic and material consideration is
conveyed from the Forest Department to the community. While participatory approaches are expected by the initiating agencies (primarily the Forest Department and quite often an NGO acting as the facilitator) for co-management, these have to be done within the existing framework of forest management regulations (Sarin et al. 2003). Such regulations quite often skirt the issue of communities’ values and aspirations for sustainable forest management (Roberts & Gautam 2003; Sarin et al. 2003). While the prime reason is a lack of interest by the department to incorporate community values in forest management plans due to the department’s inherent silvicultural focus, the difficulty is also partly due to the lack of appropriate communication mechanisms. I define a “communication mechanism” as a process or means of communication to get things done.

In many countries, local communities have been alienated from the land through centralized forest management, resulting in strained relationships between the communities and the central Forest Departments. With increased recognition of the importance of community participation in forest management, there have been efforts by the Forest Departments of Nepal, Vietnam, Cambodia and many other Asian countries to co-opt communities into the management of forests (Durst et al. 2005). However, such co-management frameworks have been strongly influenced by the Forest Department’s priorities and have rarely reflected the values and aspirations of the communities (Roberts & Gautam 2003; Bourgeois 2011; Sarin et al. 2003).

1.2.3 Communication in development
The need for better communication is increasingly recognized, not only by national governments but also by international development organisations (TCI et al. 2007). There are many studies of experiences across countries where communication is stated to be important for successful community forestry programmes (Arnold 1991; Poffenberger & McGean 1996; Moote & Becker 2009; Durst et al. 2005). In most development programmes, communication plays an important role and large donors, including the Food and Agricultural Organisation of the United Nations and the World Bank, have emphasized this in their programme implementation strategies (TCI et
al. 2007). The First World Congress on Communication for Development in 2006 was one of the few initiatives that tried to bring these varying experiences to a single forum. The Congress “sought to provide the evidence and make the arguments for placing Communication for Development much closer to the centre of development policy and practice” (TCI et al. 2007). While the conference showcased many successful experiences, it also recognised that there was inadequate documentation of these.

Internationally, stakeholders and practitioners have interpreted communication in a number of different ways. Communication as a subject is seen differently depending upon the context, from persuasive or marketing communications that “sell” products and development ideas to communication as a process of consensus building. This is no different in the case of forest management, especially when communities are involved as co-managers in community forestry. From “selling” the community forest management program to instances of consensus-building for increased understanding, communication has been used in a variety of ways. Internationally, the plethora of community forest initiatives in different countries have given rise to a range of experiences from differing cultures that have not yet been studied for their communication successes and failures. Indeed, one of the needs highlighted by the 9th United Nations Roundtable on Communication for Development in 2004 was to recommend harmonization of communication strategies and approaches so that these could be much easily understood and adopted (TCI et al. 2007).

The challenges of poverty emphasised in the Millennium Development Goals (MDGs) are often the benchmark for international development agencies, national governments and non government organisations (TCI et al. 2007). These challenges require communication to go beyond the normal flow of information and require challenges such as respect for cultural diversity, self-determination of people, economic pressures, environment, gender relations and political dynamics to be addressed (TCI et al. 2007). A study of forest communication conducted at the European Union level revealed that the forest sector’s communication mix (as stated in communication strategies) is predominantly one-way, with a focus on information
distribution (instrumental distribution) (Janse 2005). Similar scepticism about the role of communication has been echoed in a World Bank report presented at the 2006 World Congress on Communication for Development. An excerpt from this Congress publication is quoted below (TCI et al. 2007):

“Attitudes of development managers and decision makers toward communication were studied in a survey commissioned by the Development Communication Division of the World Bank by Fraser, Restrepo-Estrada, and Mazzei. The findings indicated that while many managers and decision-makers are fully aware of the importance of communication in development programs, most of them use it in a broad and at times confused way. They usually conceive communication mostly in terms of public relations, media production, information dissemination, or corporate communication. The study clearly indicates the need for positioning and clarifying the scope, body of knowledge, and practical applications of the field of development communication.”

While development in general is seen to have the above mentioned drawbacks, the situations vary specifically when looking at the broader community based natural resource management approaches. In the following section I look at some of these situations.

1.2.4 International approaches to natural resource management

There are a number of co-management approaches in natural resource management depending on the type of resource, for example fisheries co-management, protected area management, watershed management and irrigation management. I discuss below some of the international experiences specifically in the context of watershed management and irrigation management both of which often have overlapping user groups with JFM. Both these management regimes uses co-management and community-based collaborations as a means to mediate the needs and claims of local communities and help resource users.
While multiple approaches to develop plans for individual villages had inherent advantages, it also had disadvantages such as to address and plan for landscape issues that originated beyond village boundaries. Over the past three decades these approaches have become vital to address challenges by including multiple stakeholders. These approaches gave rise to a shift from expert-driven ‘technical’ approaches to decentralised collaborative solutions to natural resource management to address landscape level problems (Koontz & Newig 2014).

Regular supply of freshwater often requires working with upstream landscape which frequently encompasses forest lands (Chandran and Pastala 1998). To mitigate the issues of erosion and flooding during rains, upstream water management structures like check dams and percolation tanks become necessary. In most Asian countries that adopted Participatory Watershed Development (PWD) such as India, China, Philippines and Indonesia or the Integrated Catchments Management (ICM) in Australia, the governance and management encompassed a wide range of stakeholders from across villages (or settlements) to multiple departments. In New Zealand, a similar approach used is the Integrated System for Knowledge Management (ISKM). In United States, the earlier technical approach to watershed management has been replaced by collaborative approaches. In all these situations the central theme was to find solutions to problems that originated beyond point sources and not amenable to command-and-control policies (Koontz & Newig 2014).

In India, a constant issue that had links to the watershed approach and JFM was the requirement to get permission from the Forest Department for working on the forest lands which were often the upstream hilly tracts.

Participatory Irrigation Management (PIM) was seen as an innovative solution to inefficient and often non-functional government controlled water management structures that were built to irrigate farm lands. In 1989, the Mexican government adopted a new water policy that transferred the management of irrigation projects to user groups. This served as a model for future programs globally (Groenfeldt & Svendsen 2000). For example, this model was adopted in countries with large irrigation areas such as Argentina, Colombia, Japan, Mexico, Taiwan and Turkey.
and also in countries with medium to small irrigation areas such as India and Philippines.

PIM committees typically consisted of water-user groups and comprised of farmers from the catchment area. Despite considerable amount of time and effort required to form the committees, the ability to share resources equitably and take quick management decisions, helped make the program effective and functional over successive years. Incorporation of farmers perspective, sense of ownership, increased transparency of processes were some of the many positive impacts of PIM (Groenfeldt & Svendsen 2000, Enarth 2008)

Government-centred and technical-based management of natural resources has increasingly been replaced by more community-based collaborative approaches to find solutions to inefficient management of natural resources along with addressing community needs (Enarth 2008). In all such cases, government officers are expected to adapt to these changes. Due to the general prevailing bureaucratic structures and existing institutional mechanisms, many challenges including challenges in communication continue to exist.

1.2.5 Mechanisms for improving communication

A study by Matta et al. (2005) showed that a lack of mechanisms for open communication impaired the Indian Forest Department’s effectiveness and consequently severely restricted the emergence of common understanding. However, it is important to understand how public attitudes differ from those of forest managers so as to enhance communication and resolve conflict about natural resource issues (Gregory et al. 1996). While it is important to initiate communication during a conflict situation, the outcome also depends on the intentions of the parties concerned, as communication could be used to resolve or exacerbate the conflict (Krauss & Morsella 2000).

While quite a few studies have documented participatory approaches (Mansuri & Rao 2004), it is difficult to assess which mechanisms make them work and can be translated to a policy framework. Communication issues could undermine new policy
approaches if they are poorly understood by the lower levels of government (Driscoll & Evans 2005). Studies have observed that in India there are no formal mechanisms to provide forestry information to guide national policy or for developing policy or management plans (Prasad & Rathore 2000). Hence development of policy has been more the work of expert committees rather than a genuine participatory effort involving multiple stakeholders. In recent years, the participation of civil society in policy-making has increased and much policy-making has become consultative, with an emphasis on facilitating stakeholder discussions instead of only harnessing expert knowledge and perpetuating the “cult of expertise” (Enters et al. 2003; Brunson 1992). However, despite some changes, there is a widely held view that the role of the bureaucracy in policy formulation has continued to be pervasive (Jain 2001). While participation is considered important for policy formulation, mechanisms for regular consultation between stakeholders are often varied and sporadic (Chandran & Pastala 1998). There has been poor communication between the users and producers of information in JFM (Prasad & Rathore 2000). While there is a need for improved transfer of information about management and policies from communities to decision makers, there is also a need for improved ways of communicating information to communities in ways that can be easily used for planning by those communities (Meitner & Gandy 2004). Such findings are consistent with studies that have emphasized the importance of communication and have shown that two-way communication is an essential ingredient for co-partnerships in forest management (Appiah 2001).

While the importance of effective communication is recognized, complexity arises due to the presence of multiple approaches and beliefs. Culture, for example, has a dominant effect on the way individuals and communities perceive and approach forest management. Apart from the values that communities hold for forests, the management approach itself may differ. Scientific forest management is often seen as departmentalized and goal-centered, whereas forest-dependent communities are said to emphasize a consensus-driven, holistic approach (O’Flaherty et al. 2008; Turner 2005; Sliammon Natural Resources Committee 2005). These different approaches stem from the underlying philosophies that make any form of co-
management challenging. As a result, the communication goals in both cases are likely to be different. On the other hand, approaches to development can also differ based on the dominant development philosophy of the organisation supervising the development.

Some managers see the goal of communication as being the identification of common ground (Brunson 1992). A well-known theory is Habermas’s Communicative Action, in which individuals and organisations in society seek to reach a common understanding and coordinate actions by reasoned argument, consensus, and cooperation, rather than by strategic action strictly in pursuit of their own goals (Habermas 1984). The theory suggests that in the future, there may be greater public participation in planning and decision-making, greater sharing of information with the public, and the opportunity to reach consensus through public dialogue (Bolton 2005).

While there are models that can be used to assess the process and outcomes of communication for social change (Figueroa et al. 2002), they do not address issues that emerge in forest management. These models do not address any specific Forest Department – community relationship that is necessary for the co-management of the forest. Communication, on the other hand, has been well-studied in business management and organisational behaviour. Communication audits that are often undertaken within the corporate context are increasingly being adopted by non-profit organisations (Coffman 2004). However they too offer only limited ways to evaluate communication, such as in the limited setting of an organisation. These existing models and approaches are insufficient for an understanding of communication within the context of forest management.

1.3 Communication concepts: Power, technology and culture
Concepts of communication and communication theories are numerous and diverse and run into the hundreds. The Encyclopaedia of Communication Theory (2009) lists more than three hundred entries on this subject (Littlejohn & Foss 2009). In this research, I have narrowed down to a few theories that resonated with what I have experienced and am interested in. In the section on the theories of communication, I
have introduced the Aristotelian and the Buddhists Models of communication (Dissanayake 2010). The reason I do so is that I believe the Forest Department in India and the policies it follows has a lot to do with the approaches adopted by the British before independence (Barton & Bennett 2010; Rangarajan 1994). In contrast, the community has been culturally influenced by tenets of Hinduism and Buddhism. For the purposes of understanding the current situation, I have chosen to use a cause and effect model, as suggested by Margaret Archer (2002). This helps in not only separating the events but also looking at particular situations from cultural and structural aspects separately. To further dissect communication events and to see the possible communication (or rather the lack of it) over different stages of co-management, I have used the critically acclaimed theoretical construct of Latour (2004) for a “new constitution”. The reason I thought this fits well in the discourse is that it delineates specific steps for governance, ensuring that the skill sets of different stakeholders are taken into account.

In the section below, I briefly describe these theories and their relevance to the study of communication. Further I suggest two other ways of looking at communication specifically within and across Forest Departments and communities.

### 1.3.1 Theories of communication

Communication has been studied since ancient times. These discourses have guided future generations of scholars. The varying approach to communication has been examined extensively by (Dissanayake 2010), who compares western and non-western communication theories and finds western communication theories, which he terms as Aristotelian theories, inadequate. He therefore argues that it is also important to examine communication concepts in non-western societies. Dissanayake goes on to examine Asian concepts and focuses on the Buddhist concept of communication stemming from Hinduism (Dissanayake 2003; Dissanayake 2007). Melkote and Steves (2001) develop this discussion and compare Aristotelian and Buddhist models of communication (Table 1.1). This comparison shows the dichotomy and the inherent power that exists in the Aristotelian model. Contemporary mainstream communication as practised by
Eurocentric governments (including countries with colonial legacies) continues to have elements of the Aristotelian model.

Table 1.1: Aristotelian and Buddhist models of communication (Melkote and Steves 2001)

<table>
<thead>
<tr>
<th>Aristotle Model</th>
<th>Buddhist Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emphasis on communicator</td>
<td>Emphasis on receiver</td>
</tr>
<tr>
<td>Influence a key notion</td>
<td>Understanding a key notion</td>
</tr>
<tr>
<td>Focus on control</td>
<td>Focus on choice</td>
</tr>
<tr>
<td>Emphasis on outward process</td>
<td>Emphasis on both outward and inward process</td>
</tr>
<tr>
<td>Relationship between communicator</td>
<td>Relationship between communicator</td>
</tr>
<tr>
<td>and receiver asymmetrical</td>
<td>and receiver symmetrical</td>
</tr>
<tr>
<td>Stress on intellect</td>
<td>Stress on empathy</td>
</tr>
<tr>
<td>Manipulation</td>
<td>Dialogue</td>
</tr>
</tbody>
</table>

Most communication models borrow key elements from the Aristotelian and Buddhist models. For instance, some of the common elements of most models are the communicator, receiver, the message, channel or mechanism and the noise. Considerable effort has gone into accounting for the complex array of situations that have affected the communication process.

1.3.2 Margaret Archer: Communication stages in forest management

Communication in co-management of forests is complex not only because it encompasses individual communication but also because it involves communication between organisations such as village institutions and forest departments. In addition, communication is often within a context of asymmetric power or differing and continuously evolving cultural contexts. Margaret Archer in her book, Realist Social Theory, attempts to avoid conflating the phenomena of agency and structure and describes them through “analytical dualism” (Archer 1995). While recognising the interdependence of structure and agency (i.e. without people there would be no structures) she argues that they operate on different timescales. This is a useful concept that is elaborated in the “morphogenetic sequence”. According to Archer, by
separating structural and/or cultural factors that form the basis for the action of agents, it is possible to investigate how those factors shaped the interactions of agents and how those interactions in turn affected the initial structural and/or cultural context. This sequence is termed a morphogenetic sequence. A better understanding of these relationships is likely to emerge when the structural and/or cultural factors that affect the agents are isolated and studied over a period of time. Using this concept, the current co-management process can be depicted incorporating temporality (Figure 1.1).

**Figure 1.1: The co-management process over time**

Co-management begins essentially with an agreement by the co-managing partners, i.e. in the context of Joint Forest Management, the Forest Department and the community organisation (called the “material interest group” with interest in forests, together forming the people’s structure). While the agreement to manage the forest (material structure) is a single event, the communication processes before and after shape the outcome. Co-management partners affect the agreement and in turn are affected by the agreement once it is instituted. Communication if it is effective, results in changes in all the structures (including cultural structures). According to Archer, the subsequent change in people’s structure due to their own actions could be called morphogenesis of agency, meaning that the agents of change themselves are changed.
According to Archer (1995), one of the effects of morphogenesis of agency is restructuring of primary agents. In JFM a “primary agent”, such as the village community could organise and becomes a “corporate agent” such as the JFMC. Archer calls this double morphogenesis. Morphogenesis of agency can produce another type of morphogenesis, which is the morphogenesis of “actors”, roles played by persons. When agents regroup, such as when they form JFMC, an elaboration of roles of the individual takes place. For example, after the formation of JFMC, a person in the village may not only have the role of, say, a farmer, but also that of a JFMC member. Hence the number of roles of persons increases. Archer calls this process the triple morphogenesis.

The Pre-Agreement Phase begins long before the actual agreement and has a very strong impact on the outcome. In co-management, the framework for this agreement is generally set by the government. This also implies that many of the conditions for the agreement are non-negotiable, such as the ownership of forest land. However, it also allows for discussions on the specifics of management that play a prominent role in defining the activities of both the Forest Department and community. Communication during Pre-Agreement Phase takes the form of information dissemination, consultation, participatory appraisals, dialogue and negotiation. In the Post-Agreement Phase, communication arises out of implementing the agreement, mostly in terms of achieving what was envisioned in it. This takes the form of information exchange, monitoring and feedback. Situations that emerge create learning opportunities and sometimes conflict that may require further consultation and resolution. Learning may or may not happen and depends on whether the institutions have the explicit intention to do so. Adaptive co-management that involves active co-learning and collaboration and triple loop learning wherein institutions transform as a result of changing contexts and understanding, are requirements that need to be incorporated for continuous improvement (Colfer 2005; Senge & Suzuki 1990).
1.3.3 Bruno Latour: Communication content and stakeholders

While the above distinction based on time helps us compartmentalize the process, it needs further scrutiny to help focus on other aspects that affect communication. The governance model suggested by Bruno Latour in his book *Politics of Nature* could give some direction (Latour 2004). Latour suggests that to avoid the never-ending discussion between facts and values, it may be useful to consider each new “proposition” from the standpoint of acceptability to the collective. To do that, instead of having representative stakeholders, four professions are tasked with the objective of utilising their skills to determine collectively if the “proposition” merits consideration for acceptance in the collective. The four professions consist of scientists, politicians, economists and the moralists. In forest management, the “co-management agreement” could be seen as a “proposition” although it does not strictly adhere to the human-nonhuman alliance that creates a proposition that Latour envisages. However, if one considers a “co-management agreement” as a process, then the introduction of this process into the community entails considerable adjustments in the collective’s (community and the Forest Departments) relationship with the forest and with each other.

The concept becomes useful in the current context when it is used to help deconstruct communication by distinguishing the kind of discussion (the content) that each of the professions engages in and how it is resolved. In both the Forest Department and the community, elements of all professions exist. It is possible that some of these professions are not engaged and that their perspective is therefore not taken into account. However, by taking the perspectives of all these professions, issues that may otherwise have caused harm to the collective’s well-being could be mitigated. The overall institution of the “proposition” should be a net positive gain for the collective. There are two other professions, the “diplomat” and the “administrator” who also have specific roles. The brief role and skill of each of the professions as envisioned by Latour is shown in Table 1.2 (Mike 2009).
Table 1.2: Roles and skills of Latourien professions

<table>
<thead>
<tr>
<th>Profession</th>
<th>Role and Skill</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scientist</td>
<td>Scientists have the instruments and laboratories to detect new things, and so can tell us of anything that should be taken into the collective and naturalized.</td>
</tr>
<tr>
<td>Politician</td>
<td>Politicians can compromise and make enemies, as an enemy is 'one who is rejected but will come back the next day to put the collective at risk'. An enemy is not human specific (Latour uses the example of prions and mad cow disease).</td>
</tr>
<tr>
<td>Economist</td>
<td>Economists must economize and offer scale models of precisely what is taken into account by the collective. They make sure the collective knows what is internalized and what is externalized using a common language and make the collective describable.</td>
</tr>
<tr>
<td>Moralist</td>
<td>Moralists venture out of the collective to see things from the outside. They ask 'what do those things want?' and make sure we treat all things as a means and an end.</td>
</tr>
<tr>
<td>Diplomat</td>
<td>The diplomat is exploring a new reality. He/she is also at a distance from his/her own collective, knowing that not everything currently in the collective reality is essential to that reality, and that, through a process of negotiation, two collectives can agree to merge, throwing away what is painfully decided to be superfluous, and keeping what is deemed to be truly essential. By both being an open representative of his/her collective, and yet detached from it, the diplomat is essential to the negotiations necessary for two collectives to communicate rather than fight.</td>
</tr>
<tr>
<td>Administrator</td>
<td>The skill of the administrator is indispensible to the functions of the &quot;new constitution&quot; proposed by Latour. The skill makes it possible to document collective experimentation and exerts the third power; follow up, while ensuring respect for due process.</td>
</tr>
</tbody>
</table>

Latour crafts a process in which the “new constitution”, primarily consisting of six requirements, harnesses the skills of all the above professions to make it work. The framework consists of an upper house and a lower house. The “power to take into account” rests with the “upper house” with two requirements of “perplexity” and “consultation”. The “lower house” represents the “power to arrange in rank order” with two requirements of “hierarchy” and “institution”. The six requirements, of which four are in sequence beginning with “perplexity”, are shown in Figure 1.2 and described in Table 1.3 (Latour 2004).
Table 1.3: The requirement of the different houses

<table>
<thead>
<tr>
<th>The requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The requirement of perplexity</strong>: An investigation must consider the evidence that appears, no matter how surprising or unpleasant it might seem.</td>
</tr>
<tr>
<td><strong>The requirement of consultation</strong>: Propositions cannot be considered in isolation: they have to be examined by an appropriately constituted jury.</td>
</tr>
<tr>
<td><strong>The requirement of hierarchy</strong>: You cannot just accept a proposition as true by itself: it has to fit together with other propositions that you wish to consider true.</td>
</tr>
<tr>
<td><strong>The requirement of institution</strong>: Once a proposition has been appropriately placed in a hierarchy, it should be accepted, rather than constantly challenged.</td>
</tr>
<tr>
<td><strong>Separation of powers</strong>: To distinguish the separateness of the power to 'take into account', the power to 'put in order' and the power to 'follow up'.</td>
</tr>
<tr>
<td><strong>Scenarization of the totality</strong>: To imagine the assembly or the collective in its various different scenarios</td>
</tr>
<tr>
<td><strong>Follow up</strong>: The seventh requirement (not shown in the diagram). This requires the procedures to be observed and documented. Allows for learning to take place.</td>
</tr>
</tbody>
</table>

If we relook at the excerpt from the 2006 World Congress on Communication for Development mentioned earlier from a Latourian perspective, we can see the merit of this process. First of all, the situation seems to fall in Latour’s first house of
perplexity. The people interviewed were clearly unsure how and what to communicate in the context of development. This is a stage that requires “consultation” with the various “professions” in the jury. However, the research is focussed on managers and decision makers, who in Latour’s scheme of professions fall in the realm of “scientists” and “administrators”. No discussion is attempted with the “politicians”, “economists” and “moralists”.

In the co-management of forests, within each of these six professions, it is possible to make further distinctions to reflect possible power plays and consequent epistemic injustices (Fricker 2009). In the case of co-management involving a Forest Department and a community, this can be done by classifying groups based on the dominant paradigm that exists with each partner (Table 1.4).

**Table 1.4: Professional leanings (or traits) in a hypothetical forest department and a hypothetical Indigenous community.**

<table>
<thead>
<tr>
<th>Professions</th>
<th>Forest Department</th>
<th>Indigenous Community</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scientist</td>
<td>Conventional science</td>
<td>Civil Science (and TEK)</td>
</tr>
<tr>
<td>Moralist</td>
<td>Mainstream culture</td>
<td>Indigenous culture</td>
</tr>
<tr>
<td>Economist</td>
<td>Maximizing profit (often individual)</td>
<td>Sharing resources (often collective)</td>
</tr>
<tr>
<td>Politician</td>
<td>General good (often majority vote)</td>
<td>Good of all (often consensus)</td>
</tr>
<tr>
<td>Administrator</td>
<td>Written documentation</td>
<td>Oral documentation</td>
</tr>
<tr>
<td>Diplomat</td>
<td>Conveys what is possible (or not) to community</td>
<td>Finds what is possible (or not) for community</td>
</tr>
</tbody>
</table>

Table 1.4 depicts the existing cultural structures which condition the socio-cultural interaction that occurs in “communication”. These form the dominant “structural conditions” that currently exist. This is the first stage of the four stages that are mentioned by Archer (1995) for social analysis; (1) structural or cultural conditioning, (2) social or socio-cultural interaction, (3) its immediate outcome and (4) structural or cultural elaboration.
Within each profession there is a possibility of perceptible differences in opinion. Being able to address these values is not devoid of power equations; addressing such differences by communicating and arriving at a shared understanding would contribute to the success of co-management (Fortmann 2009; Buruchara 2008).

Once these varying and often conflicting values and aspirations are articulated (communicated across the professions and within the professions), they need to be related to the current situation or “reality” that exists. In Latour’s words, this would involve determining the “hierarchy” that the new situation requires. If the new situation (i.e. co-management) does not fit in, it is rejected for the time being. If it does fit in, then it becomes “instituted”, bringing about a balance between these varying factors and paving the way for a stable working system.

1.3.4 Individual and organisational communication

Another framework within which communication can be studied is derived from the context of the source of communication, namely an individual or organisation. In the co-management of forests, communications can arise from either individuals or organisations (Table 1.5).

Table 1.5: Individual versus organisational communication matrix in forest management

<table>
<thead>
<tr>
<th></th>
<th>Community Organisation</th>
<th>Individual from Community</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forest Department</td>
<td>Situation 1</td>
<td>Situation 2</td>
</tr>
<tr>
<td>Officer from FD</td>
<td>Situation 3</td>
<td>Situation 4</td>
</tr>
</tbody>
</table>

These specific communication situations can be explored and analyzed to see how communication can be made more effective. A challenge lies in delineating what constitutes organisational communication versus individual communication in the context of co-management. A further challenge is to distinguish formal and informal communication in the context of oral and written forms of communication used by
individuals and organisations and their skills and competencies. This could include communications between departments and communities through publications and websites.

1.3.5 Inter and intra communication between the Forest Department and communities

In addition to the above frameworks to study communication, there is a specific situation in which communities organize institutions to co-manage a forest with a Forest Department. Often, the office bearers of the community understand the relationships well, but are unable to communicate the intricacies of the interactions to the rest of the community. This is sometimes seen by the community members as a lack of confidence on the part of the office-bearers, or is interpreted as being due to insurmountable conflicts, even though neither explanation may be correct. The communication difficulty could arise as a result of many factors, including the lack of an adequate communication mechanism. On the other hand, the spokesperson for a Forest Department is often decided by the proximity of the department’s offices to the community. In general the communication is most commonly between communities and the lower cadres of the Forest Department. This can cause communication bottlenecks within a department, as information does not always reach the higher cadres, especially if the contents of the information are seen as being potentially detrimental (personal communication with a senior Forest Department officer, Gujarat, 2011). Interestingly, rapid advances in technology such as cellular telephones and vernacular websites are increasing the scope for long distance contact and information flow. Despite these changes, information about policy, regulation changes and departmental priorities often fail to reach the affected communities (Patel et al. 2013; Hirwade 2010). This brings about a special situation in which certain sections of a department dominate communication with certain sections of a community (Figure 1.3):
Figure 1.3: Inter and intra communication between the Forest Department and communities

A community leader is often the spokesperson for the community and takes the role of a “communicator”. Latour’s idea of a “diplomat” could be used to identify a good communicator and see if the “communicator” profession fulfils the role. A diplomat represents the viewpoint of the collective but at the same time is interested in exploring ways to merge with the other collectives, keeping the essentials, communicating and resolving conflicts.

The above interpretation of previous studies indicates that there are different ways to look at communication in the context of JFM. Since communication pervades all sections of governance it is necessary to disaggregate and study the different parts, especially since previous actions impact on later situations as mentioned by Archer (1995).

1.4 Chapter outline
The following is an outline of the chapters in the thesis:

In chapter 2, I describe the methods of how I conducted the research (specific methods and participatory approach) along with my own background. I also share my experiences that led to my research.

Chapter 3, 4 and 5 describe my results at the village level, department (state) level and at the national level on how JFM works in India.
In chapter 3, I introduce the study area (the state of Gujarat and specific villages) and the JFM situation from the perspective of the community. I also look at the JFM resolution of Gujarat and explore the challenges in communication as perceived by the community.

In chapter 4 I examine the perception of senior forest department officers from across India and build on the previous chapter by looking at the Forest Department structure in Gujarat and at the national level.

In Chapter 5, I look at some of the key policy making processes that were followed in JFM at the national level, specifically based on my own observations and involvement in the process. I trace the evolution of JFM in India nationally and locate it among the various other institutions and process that exists.

In Chapter 6 I develop and describe the Communication-Governance Model based on the theoretical constructs of Archer and Latour (introduced in chapter 1). I also give broad steps on ways to use this model.

In chapter 7, I use the Communication-Governance Model to analyse the results from chapters 3, 4 and 5, from the community, to the state, to the national level, to inform the analysis and discussion.

In chapter 8, I conclude with my key findings, policy implications and general recommendations.

Apart from the specific results described in Chapters 3, 4 and 5, the Communication-Governance model in Chapter 6 is one of the main outcomes of my research.

In my next chapter on research methods, I elaborate on the methods used.
CHAPTER 2: RESEARCH METHODS

2.1 Introduction

This chapter examines in detail the methods used in this research. It begins with a description of the specific objectives and areas of inquiry, and is followed by a section on the research area before describing the methods used. In the methods section I look at the methods that were followed, their appropriateness with regards to the design of this research and details about data collection and analysis. Also I discuss changes to the design of the study, the reason for these changes and the effects of this deviation. In the last section, I give an overview of stakeholder’s involvement in the research and my own prior relationship to the research area and community.

2.2 Objectives

This research is predicated on the belief that communication issues have hindered the co-management of forests (Greskiw & Innes 2008). The purpose of this research is to better understand these communication challenges, to examine different communication mechanisms and to assess the overall effectiveness of alternative communication approaches in Joint Forest Management (JFM). The primary objectives of the research are to examine why issues of communication hinder the co-management of forests and to create a framework to help reduce these obstacles. The research can be categorized into the following four sections of inquiry:

- To understand communication challenges and how to overcome them;
- To identify existing and possible communication mechanisms, specifically local communication mechanisms;
- To assess the perceived effectiveness of different communication mechanisms; and
• To develop a communication framework.

2.3 Research areas

The primary research area is India. Data were collected from households at the community level in Gujarat, from a range of forestry officers from different levels of government and from Non-Governmental Organisations (NGOs).

India has a long history of government-controlled forest management. In recent years, the participation of local communities in forest management has been increasing, particularly with tribal communities in India. In India, the National Forest Policy of 1988 opened up initiatives for JFM with communities located near forests (MoEF 1988). This was necessary due to the rapid degradation of forests and subsequent livelihood stress on forest-dependent communities (Sundar 2000). While forests were mostly seen as an economic resource by the state till the 80s, the failure to manage them in ways beneficial to rural communities was causing immense hardship to communities dependent on forests for their livelihoods (Mukherjee et al. 2008). In 2002, Bahuguna estimated that around 350 million people in India remove USD 9 billion worth of firewood, timber, fodder, and non-wood forest products every year (Bahuguna 2002). It is however very difficult to estimate the extent to which these forest products have been able to improve the livelihoods of the poor, or reduce poverty, as it is difficult to define the dependence of communities on forests¹ (Saxena 1997). Fifteen years after the National Forest Policy in India was legislated, there was still limited understanding of the extent to which the policy has been able to meet the values and aspirations of communities in managing their forests (Sinha & Suar 2003).

¹ A recent CIFOR-PEN global study estimates that on average, forest income constitutes about one fifth of total household income while environmental income (forest and non-forest) makes up more than one fourth (Angelsen et al. 2014). I was part of the PEN study.
The research was imbedded in a situation where the forest managers and communities were working within a specific set of spatial constraints at a given time. They also interact with each other for forest management. The Forest Department and the village community have been involved with Joint Forest Management activities in the research area of Gujarat for over two decades. Some of these villages were assisted by NGOs, such as the Aga Khan Rural Support Programme-India (AKRSP). The history of forest management at the research location and previous interactions between these two entities are two of the factors that impinge on the level of current communication effectiveness. Communication may also depend on the availability and access to particular mechanisms for regular interactions, such as State and Divisional level Working Groups in the Forest Department in Gujarat (Chandran & Pastala 1998). In early 1999, a Joint Forest Management Cell (JFM Cell), a semi-autonomous unit that interfaced between the Forest Department, village community and NGOs, was also involved in facilitation and networking in Gujarat. The JFM Cell was a collaboration between the Aga Khan Foundation-India (AKFI), the State Forest Department, and the Gujarat Ecological Education and Research Foundation (GEER Foundation). The GEER Foundation is a quasi-government organisation with the state’s Chief Minister being the Chairperson and key functionaries from the Forest Department. A publication by AKFI\(^2\) gives details about the JFM Cell. “The objective of the JFM Cell was to expand and strengthen JFM activities in Gujarat. The Cell adopted a proactive strategy at the operational and policy level to achieve its aims. Apart from networking with stakeholders, its activities included streamlining the functioning of Divisional Level Working Groups, monitoring, documentation and sharing of information through a vernacular newsletter, conducting feasibility and research studies to facilitate the expansion of JFM to new villages, developing strategies and approaches for Working Schemes and Microplans and conducting training and outreach services to sensitize and bring together the Forests Department and villagers on JFM activities” (AKFI 2001). The JFM Cell used many traditional

\(^2\) AKFI used to publish a newsletter of best practices named “Enriching Experiences”.
communication mechanisms for information dissemination and participatory planning to help the village community and Forest Department establish Joint Forest Management (JFM).

The tribal communities in India have unique values and traditional practices associated with forests that are very important for the village community but rarely feature in mainstream forest management (Gadgil et al. 1993). The lack of communication of these values in a form that can be understood and incorporated into forest management creates situations of conflict. Communities in these places have over time developed specific relationships with the forest. These have become traditional practices that are very important cultural attributes of the community thus defining the values and perceptions they have for forests. These traditional practices can also be termed as a kind of "proposition" in Latour's sense. From the point of view of the Forest Department, these propositions are new things asking to be admitted to the world controlled by it. Until recently these values and perceptions were hardly taken note of, much less incorporated into mainstream forest management. The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Right) Act, 2006 (Forest Rights Act in short) partially attempts to correct these historic injustices by giving legal recognition to the rights of traditional forest dwelling communities and giving them a voice in forest and wild life conservation. Nevertheless, due to the colonial histories and failures of post-independent governments, the rules for governance of the forest have continued to exercise a strong Eurocentric approach. This is evident in India, where much of the rules framed by the Forest Department at the state and national level are still based on the Indian Forest Act of 1927 (despite India gaining independence in 1945).

2.4 Methods

In this section, I review the methods employed in my research and relate these to the appropriateness of its design. I also discuss the population and sample selection. In addition I look at the process followed for respondent confidentiality and
consent, and how data were collected. I also provide information on the methods used for data entry, coding and analysis.

2.4.1 Research method and design appropriateness

My research focused on communication challenges between the Forest Department and local communities. I opted to study communication challenges by looking at the process of the Joint Forest Management programme in India. Communication was studied using the frameworks of Bruno Latour and Margaret Archer to disaggregate the different stages of this process. At the community level, I used Margaret Archer’s idea of the “morphogenetic sequence” and attempted to isolate the structural and cultural factors affecting the communities over time. A critical turning point in co-management is the co-management agreement, and I looked at the structural and cultural factors that impact the pre- and post-agreement phases. In India this agreement could be called the Joint Forest Management Agreement. I looked at these changes from a communication viewpoint.

Most community forestry around the world involves some sort of acknowledgement of the rights ceded by the government to communities (World Bank 2008). This acknowledgement often culminates in formal agreements between the government and individual communities. The pre- and post-agreement phases of a Joint Forest Management Agreement have distinct communication objectives. A better understanding of the evolution of communication throughout the stages of the agreement process was possible by differentiating these phases.

Using Latour’s framework, I looked at the communication challenges from two perspectives, the theoretical (as would have happened if the governance process had followed Latour’s framework) and the current reality (as it is happening). The analysis looked at the possibility of changes in the current way of functioning. The combination of my field studies with a comprehensive analysis of the communication literature related to co-management challenges provides a contribution to the
development of a communication framework/model for Joint Forest Management Agreements in Gujarat, India.

The underlying assumption of the research was that improved communication between the Forest Department and communities would lead to the improved co-management of forests. In this context, the main research question guiding the study was how communication between Forest Departments and local communities could be improved. To study this, I outlined four preliminary measures to disaggregate the concept of communication in the context of the co-management of forests (Table 2.1).

**Table 2.1 Research objectives and strategy**

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Research Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>To understand communication challenges and how to overcome them</td>
<td>Communication and Power&lt;br&gt;Timeframe: Use Pre-Agreement, Agreement and Post-Agreement Phases (based on agreement for co-management)&lt;br&gt;• Pre-Agreement Phase: Perplexity, Consultation (as envisaged by Latour)&lt;br&gt;• Agreement: Hierarchy (as envisaged by Latour)&lt;br&gt;• Post-Agreement Phase: Institution (as envisaged by Latour)&lt;br&gt;• Organisation versus individual communication and their competence&lt;br&gt;• Identifying communicators, role of ‘diplomats’ (as envisaged by Latour)</td>
</tr>
<tr>
<td>To identify existing and possible communication mechanisms, specifically aboriginal communication mechanisms</td>
<td>Communication and Technology&lt;br&gt;• Oral vs. Written&lt;br&gt;• Traditional vs. Technological&lt;br&gt;• Institutional and Social Networks</td>
</tr>
<tr>
<td>To assess perceived effectiveness of different communication mechanisms</td>
<td>Communication and Technology&lt;br&gt;• Perception&lt;br&gt;• Use</td>
</tr>
<tr>
<td>To develop a framework for communication</td>
<td>Communication and Culture&lt;br&gt;• Cross-cultural comparison (later modified)</td>
</tr>
</tbody>
</table>
The main methods of data collection envisaged were interviews, group discussions, and surveys. Interviews with the Forest Department and NGOs had both open-ended and closed questions. Surveys were conducted with the community members in each of the three villages and with senior Indian Forest Service (IFS) officers. Group discussions were conducted with community members from the three villages. The methods used for each of the research strategies are depicted in Table 2.2.

**Table 2.2 Research strategies and methods**

<table>
<thead>
<tr>
<th>Research Strategy</th>
<th>Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Communication and Power</strong></td>
<td>• Interviews (With Forest Department and NGOs)</td>
</tr>
<tr>
<td><strong>Timeframe</strong>: Use pre- and post-agreement phases (based on agreement for co-management)</td>
<td>• Group Discussions (With communities)</td>
</tr>
<tr>
<td>• Pre-agreement Phase: Perplexity, consultation (as envisaged by Latour)</td>
<td>• Surveys (With communities and Senior Forest Department officers)</td>
</tr>
<tr>
<td>• Agreement: Hierarchy (as envisaged by Latour)</td>
<td>• Literature review</td>
</tr>
<tr>
<td>• Post-agreement Phase: Institution (as envisaged by Latour)</td>
<td></td>
</tr>
<tr>
<td>• Organisation versus individual communication and their competence</td>
<td></td>
</tr>
<tr>
<td>• Identifying communicators, role of ‘diplomats’ (as envisaged by Latour)</td>
<td></td>
</tr>
<tr>
<td><strong>Communication and Technology</strong></td>
<td></td>
</tr>
<tr>
<td>• Oral vs. written</td>
<td>• Interviews</td>
</tr>
<tr>
<td>• Traditional vs. technological</td>
<td>• Surveys</td>
</tr>
<tr>
<td>• Institutional and social networks</td>
<td>• Literature review</td>
</tr>
<tr>
<td><strong>Communication and Technology</strong></td>
<td></td>
</tr>
<tr>
<td>• Perception</td>
<td>• Interviews</td>
</tr>
<tr>
<td>• Use</td>
<td>• Surveys</td>
</tr>
<tr>
<td>• Communication and Culture</td>
<td>• Literature review</td>
</tr>
<tr>
<td>• Cross-cultural comparison* (*later modified)</td>
<td></td>
</tr>
<tr>
<td><strong>Communication and culture</strong></td>
<td>• Group discussions*</td>
</tr>
<tr>
<td><strong>Cross-cultural comparison</strong></td>
<td>• Literature review</td>
</tr>
</tbody>
</table>

My research was both qualitative and quantitative. A combination of methods was used as it helped gain a better understanding of the historical and existing status of communication in co-management, as well as the reasons leading to the current
status of communication. The research was non-experimental as there was no intent to manipulate the condition, state or experiences of the participants. I conducted surveys at the community level and with senior Forest Department officials, designing them for co-relational and comparative studies. Because the reasons for any observed correlation would have been unclear from the survey alone, I triangulated my results through group discussions in the communities and interviews with Forest Department officers. This helped to identify the causes for some of the findings.

The surveys were pre-structured with both open and close-ended questions. I prepared a list of questions to guide the interviews and group discussions. Interview transcripts and cumulative responses from the open-ended questions enabled the identification and interpretation of relevant topics, dimensions (aspects of objects, variables) and categories (Jansen 2010). The questions helped in developing an understanding of the behavior and in measuring the interests and attitudes of a cross-section of the population.

The surveys with the village communities and with the Forest Department were done in three ways. For the communities, the surveys consisted of in-person interviews. The interviews were conducted at a convenient time and place, with all household interviews being held in the villages and mostly in the respondents’ homes. This kind of in-person survey provided respondents with the flexibility and environment that may have enabled them to have the confidence to ask for clarifications if they were not clear about the questions. The questionnaire had sections on attitudes, perception and opinion. Interviews with forest department officers of Gujarat were based on a checklist of questions. Surveys of senior IFS officers were self-administered through two different methods: internet survey and printed questionnaire. Printed questions were used when the individuals could be contacted physically. This opportunity occurred when the officers were in Vancouver as part of a training programme. For all other officers, the survey was administered through the internet.
2.4.2 Population

Village Community

Households from three tribal villages formed the population for the study. The three villages were chosen purposively. I had previous experience in undertaking research in these villages and chose the villages where I had an established rapport. The three villages had a number of specific characteristics (Table 2.3). Jetpur and Kevdi adjoin each other and share a Joint Forest Management committee.

Table 2.3 Villages and their specific characteristics

<table>
<thead>
<tr>
<th>Village</th>
<th>Forest*</th>
<th>Distance from road</th>
<th>Type of village**</th>
<th>Dominant tribe (sub)</th>
<th>Distance to Forester’s office</th>
</tr>
</thead>
<tbody>
<tr>
<td>Makanjhar</td>
<td>Degraded</td>
<td>Near to road</td>
<td>Revenue</td>
<td>Bhil (Chaudhri)</td>
<td>5-6 km</td>
</tr>
<tr>
<td>Jetpur</td>
<td>High</td>
<td>Far from road</td>
<td>Forest</td>
<td>Bhil (Vasava)</td>
<td>0.5 km</td>
</tr>
<tr>
<td>Kevdi</td>
<td>High</td>
<td>Far from road</td>
<td>Revenue</td>
<td>Bhil (Chaudhri)</td>
<td>0.5 km</td>
</tr>
</tbody>
</table>

*Degraded (<40% canopy cover), High (>40% canopy cover) (FAO)

**Based on administration by Revenue Department and Forest Department

The total numbers of households in these villages were arrived at based on a listing done through Participatory Rural Appraisal (PRA) techniques in 2006. Sampling for the survey was based on this list of village households.

The ethnicity of the population in the research villages are Chaudhri and Vasava tribes. The Chaudhri population in Gujarat is 282,392, 3.8% of the total Scheduled Tribe population of Gujarat, and they are located Surat district, Valsad district and the newly formed Tapi district (Census 2001). The Vasavas and Chaudhris are sub-tribes of the dominant Bhil tribe. The Bhil is the single largest tribe in Gujarat, with a population of 3,441,945, constituting 46% of the total Scheduled Tribe population of Gujarat (Census 2001). They are distributed through the districts of Surat, Bharuch, Baroda, Panchmahal and the newly formed Narmada districts of Gujarat and also in the adjoining state of Maharashtra (Singh 2001).
The sample unit was the household, which was defined as a group of people, typically family members, living under the same roof and pooling resources such as labour and income (PEN 2007). Labour-pooling means that household members exchange labour time without any payment, e.g., on the farm. Income pooling means that they “eat from the same pot”. In local parlance, it means “cook from the same chulla or stove”.

The adult male or female of the household was interviewed, depending on availability. An adult would be anyone over the age of 18 years. Preferably, the head of the household, who was generally a man and sometimes an elder woman, was interviewed. While no stratification was done based on gender, if any woman in the household was willing to take the survey, then she was my preferred choice. I expected that due to the prevailing culture, men would generally be the respondents in the surveys. Since the enumerators were women, I also expected that this would help in getting more female respondents as I believed that women would be more comfortable discussing the questions with a women enumerator.

**Forest Department**

I conducted interviews and surveys with the Forest Department. The interviews were with state level officers from Gujarat and the surveys were with senior IFS officers drawn from 19 states across India (interview schedules attached in Appendix 3.

The selection of officers for the interview was purposive; the officers responsible for the three villages were interviewed. Officers who were not currently posted in the jurisdiction but who had been in the past also formed part of the sample. The views expressed by these officers formed a vertical cross sectional view of the Forest Department from the highest cadres at the state level to the officers working with communities at the village level.

I also had meetings with the then Principal Chief Conservator of Gujarat Forests, in 2011. These meetings did not follow the interview format and no consent form was signed. I had the meetings to keep him informed about the research, seek advise
and explore future application of the research. For similar reasons, I also met with the then Director General of Forests at the Ministry of Environment and Forests, New Delhi in 2011.

The second method of data collection consisted of surveys of senior IFS officers from across India. The population comprised all senior officers sent for training to the USA and Canada between June 2010 and July 2012. All members in this group were invited to be part of the survey through internet except 2012 June and July batches consisting of 60 officers who attended training in Vancouver. They were given a printed questionnaire which was later adapted for the web survey for other batches, with minimal changes.

**Non-Governmental Organisations**

Many NGOs work on forestry in Gujarat. I purposively chose a few NGOs that had local as well as national presence. These NGOs employed individuals who had experience in the region and were aware of the forestry situation in the sample villages. The NGOs chosen also had experience interacting with officials at the state and national level on forest and development-related issues.

Details of the communities, forest department and NGOs that were sampled are given in the next section.

2.4.3 Sampling frame

**Communities**

The three research villages (Makanjhar, Kevdi and Jetpur) had a total of 239 households. Makanjhar, with 134 households, was the largest and Jetpur, with 42 households, the smallest. The 42 households in Jetpur included four residences occupied by Forest Department officers and these were excluded from the survey. As it is a small village, I attempted to survey all the remaining 38 households. I attempted to randomly sample 45 households in both Makanjhar and Kevdi, by using numbered chits with each chit representing a household. The chits were randomly
picked for each village. A sample size of 108 households was required to achieve a confidence level of 95%, and as some attrition was expected, my initial sample size was larger. I started with 128 households, and managed to survey 119 (Table 2.4).

**Table 2.4 Village level sampling**

<table>
<thead>
<tr>
<th>Village</th>
<th>Total number of households</th>
<th>Original sample</th>
<th>Final sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Makanjhar</td>
<td>134</td>
<td>45</td>
<td>42</td>
</tr>
<tr>
<td>Jetpur</td>
<td>42</td>
<td>38</td>
<td>35</td>
</tr>
<tr>
<td>Kevdi</td>
<td>63</td>
<td>45</td>
<td>42</td>
</tr>
<tr>
<td>Total</td>
<td>239</td>
<td>128</td>
<td>119</td>
</tr>
</tbody>
</table>

Two Group Discussions, one each with men and women, were planned and conducted for each of the two Joint Forest Management Committees (JFMCs). Given that Jetpur and Kevdi share a JFMC\(^3\), individuals from Jetpur and Kevdi were invited to attend the group discussion together.

**Forest department**

In-person interviews were planned with a cross-section of Gujarat forest officers. The selection of the officers was purposive. My original plan was to interview field officers who were posted in the research area and a few key state-level officers (Table 2.5). The three research villages were situated in two Beats, two Rounds, one Range and one Division. Beat, Round, Range and Division are Forest Department administrative boundaries progressively increasing in area (See Figure 4.2, page 90, for the organisational hierarchy). However, as the research progressed, I met other officers who were also interested in being interviewed. These officers had been working in the research area, but had since been posted to other forest jurisdictions.

\(^3\) See Chapter 3, Section 3.7.1. for reasons why Jetpur and Kevdi share a JFMC.
Since many of my questions were about past actions, these officers provided important information across a range of different time periods.

**Table 2.5 Sample of forest officers interviewed**

<table>
<thead>
<tr>
<th>Designation</th>
<th>Method</th>
<th>Sample</th>
<th>Current</th>
<th>Related*</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beat Guards (BG)</td>
<td>Interview</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Round Forester (RF)</td>
<td>Interview</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Range Forest Officer (RFO)</td>
<td>Interview</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Assistant Conservator of Forests (ACF)</td>
<td>Interview</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Deputy Conservator of Forests (DyCF)</td>
<td>Interview</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Conservator of Forests (CF)</td>
<td>Interview</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Chief Conservator of Forests (CCF)</td>
<td>Interview</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Additional Principal Chief Conservator of Forests (APCCF)</td>
<td>Interview</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

**Total Interviewed** 10  6  4  10

*RF (adjointing Round), RFO (past posting), ACF (past posting), CCF and APCCF (IFM programme related)

The survey of senior IFS officers involved inviting officers selected by the MoEF to attend Mid-Career Training in US and Canada. Each group consisted of officers from different years of recruitment and employed in the IFS. The total number of invited officers was 442, of which 52 participated in the survey (Table 2.6).

**Table 2.6 Sample of forest officers surveyed**

<table>
<thead>
<tr>
<th>Designation</th>
<th>Number Surveyed</th>
</tr>
</thead>
<tbody>
<tr>
<td>MoEF</td>
<td>1</td>
</tr>
<tr>
<td>Inspector General of Forests</td>
<td></td>
</tr>
<tr>
<td>State</td>
<td></td>
</tr>
<tr>
<td>Additional Principal Chief Conservator of Forests</td>
<td>12</td>
</tr>
<tr>
<td>Chief Conservator of Forests</td>
<td>23</td>
</tr>
<tr>
<td>Conservator of Forests</td>
<td>3</td>
</tr>
<tr>
<td>Others</td>
<td>13</td>
</tr>
<tr>
<td><strong>Total Surveyed</strong></td>
<td><strong>52</strong></td>
</tr>
</tbody>
</table>
Of the 442 officers, 60 officers of the June and July 2012 batches were first contacted while attending a mid-career training program at University of British Columbia (UBC) in Vancouver. A self-administered paper questionnaire was given to all these participants for the survey. As the survey started after a number of officers had already attended the training, a web-based survey was also initiated that invited all the participants who had previously undergone the training to participate in the survey. A UBC in-house web based survey program, Edudata, was used for the online web based survey. The layout of the survey was kept similar to the written format. The only additions were extra boxes for comments, something that I learnt from the paper survey, as many respondents had written comments on a number of pages.

**Non-Governmental Organisations**

The selection of NGOs was purposive based on their pioneering work on forest management with the communities. I interviewed officers from two organisations: the Aga Khan Rural Support Programme-India (AKRSPi) and the Foundation for Ecological Security (FES) both based in Gujarat. AKRSPi has a presence in the study region and works on a number of issues related to the development of natural resources, including Joint Forest Management. Though AKRSPi has a presence in the research villages, they are not actively involved with JFM\(^4\). FES is based in Anand about 200 kilometers from research area. Though FES also did not have any presence in the research villages, it works on a wide range of common property issues in Gujarat and other parts of India and hence experienced to comment on JFM.

\(^4\) While AKRSPi had been involved extensively with JFM in other villages, in Makanjhar their activities were mainly on drinking water and Self Help Group formation. AKRSPi was in contact with Kevdi and Jetpur but its programmes were in an adjoining village Gangpur. There is a certain level of territoriality existing on who promotes JFM in the village. This originated from one of the earliest Government Resolution that had different sharing arrangement for timber harvest depending on who initiated JFM in the village. If the Forest Department initiates JFM then NGO does not work on JFM in that village.
2.4.4 Informed consent and confidentiality

The University of British Columbia has protocols for research involving human subjects. As my research dealt with human subjects, I obtained approval from the Behavioral Research and Ethics Board (BREB). This was important as the human subjects were from tribal communities in India.

Participants were first informed about the details of the research. The consent form had details of the purpose as well as the duration of the research. Participants were informed about the confidentiality of their identities. They were also informed that participation was completely voluntary and that they could refuse to participate or withdraw at any time. The consent form contained details of how to contact my supervisor, the UBC Office of Research Services and myself.

In India, getting written consent from individuals was culturally inappropriate. Many participants would have given a “thumb print” as they were illiterate. However, acceptance of something by the community leaders is generally seen as an indication of its acceptability by community members. For my survey, I translated the English version of the community member consent form into Gujarati and this was signed by the respective community leaders. The contents of the consent form were provided to the communities orally. For the group discussions, the Gujarati Group Discussion consent form was signed by all members taking part in the discussion.

Officers of the Forest Department were given the English consent form both for the interview and for the survey. During interviews with the Forest Department officers, I would also explain the idea behind the consent form. Explaining the research process, confidentiality and formal requirement for consent, helped to create a background for the discussion as well as clarifying how the data would be used. Providing this explanation also allowed the officers to state upfront if they had any reservations. There were a few senior officers and one field-level officer who were happy to have the discussions but unwilling to sign the consent form. I have
obtained oral permission of these officers to use specific quotes from their interviews while protecting their anonymity.

For survey of the senior IFS officers, 26 consent forms were collected on paper and 26 were received electronically. All the NGOs that were interviewed signed the English consent form.

This research was approved by the UBC’s Behavioural Research Ethics Board, certificate number H11-01764.

2.4.5 Data collection and coding

Data were collected over a period of 18 months, with a nine month period of fieldwork in 2011 and a web survey in 2012. For the surveys of the communities, survey forms were prepared after finalization of the questionnaire. The questionnaire was pre-tested and translated into Gujarati before its finalization. Though I have a fair knowledge of Gujarati, I took help from development professionals who were well versed. The questionnaires were then administered by the trained enumerators in each of the villages. For details concerning the development of the questionnaire and the involvement of local enumerators see Section 2.5.3.

The completed survey questionnaires from the communities and the senior IFS officers were entered into Google Form. The village communities’ data were translated into English during the data entry process. The data were then saved in MS Excel so that they could be cleaned and analyzed. There was no need for data entry for the web-based survey. The data were in English and could be downloaded directly into MS Excel.

I conducted the interviews of the Forest Department and NGO officers at their respective offices, mostly arranged through a confirmed appointment. I took notes of the interviews and these were written up at a later date. The group discussions in the villages were arranged with the community through the community leaders. The enumerators helped with the discussions with the groups comprising women. A local
colleague who is an expert on training also assisted me during the men’s and women’s group discussions in Jetpur and Kevdi. A light snack was provided at each of the group discussions.

I developed a Code Book for the village community survey. Coding was also done for the Forest Department survey. For the qualitative answers, coding was done manually.

2.4.6 Analysis

**Qualitative and quantitative analysis**

Detailed notes of each interview and discussion were analyzed using basic coding and summary techniques to distil the interviews for key information (Weber 1990; Babbie 2009). These were analyzed using statistical packages PSPP (open-source software similar to SPSS) and Statwing. Quantitative analysis of the village surveys was undertaken using basic descriptive statistics. This provided information on elements such as which sections of the population directly communicate with the Forest Department personnel; how often this communication happens; content and reasons of communication; and listing of the difficulties in approaching the Forest Department. It also indicated the main source of information about forestry activities, schemes and programs. If there were any specific instances where individuals had been able or unable to communicate with the Department, these were listed to indicate good communication practices or barriers to communication. Since elements of these were also raised in the group discussions, the notes from the discussions helped in the triangulation of the information from the survey. Information from group discussion was also used to delve deeper into the possible communication challenges, reasons for the challenges and helping to contextualize them in Latour’s framework.

The main focus of analysis was to ascertain the various communication situations that have existed. How were they attempted? What participatory discussions / consultations / negotiations took place? What were the issues discussed? What
issues did the community raise? Has the situation stabilized? What are the current communication efforts and the issues that are being faced? After identifying the common patterns, outliers were examined to see if they gave insight into any of the communication situations.

The group discussion questions focussed on Latour’s framework. Field notes were used to build up a narrative of the situation pre- and post-JFM. The analysis involved examining the narrated situation and comparing it with Latour’s hypothesized processes in the context of governance of forestlands.

**Development of a communication-governance model**

One of the main outcomes that I was hoping to develop was a framework for the analysis of communication. Initially, the strategy was to have data from two culturally different situations of India and Canada. As mentioned in previous sections this approach was dropped. Due to this change in strategy the modalities for the development of the framework required rethinking.

While entering data as well as during its analysis I was constantly trying to see the different levels in governance and the varying effects of these different levels on the community. My questionnaires were designed to look at the effect of the Executive Committee which is the governing structure of the JFMC that comprised almost all village households. While analyzing information from the IFS survey, I also realized that there were many issues of governance that were not articulated by the IFS respondents. This triggered me to think of the gaps that existed. After a number of trials, I was able to put together a cohesive model (partly based on a fusion of Margaret Archer’s and Latour’s theoretical approach) and partly based on my empirical data and experiential understanding of how rules framed by the community have had long lasting impact on community behaviour. This gave rise to a comprehensive model that looked at the relationship of structure, culture and agents. I explain this in detail in Chapter 6.

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5. The status of newer households is hazy as they are not formally in the list maintained.
I applied the model and found that it was able to give a better understanding of the process of communication and governance (and more importantly help in identifying gaps) in the JFM situation. I have explained the connection of this model with the theories of Margaret Archer and Latour in Chapter 6. I have tried to amalgamate the different pieces of information from my research under this model and analyse it to help my understanding of the communication challenges and mechanisms in Joint Forest Management.

2.5 Stakeholder involvement in the research

Communities in Gujarat were chosen purposively. I had very close contacts with tribal communities of Makanjhar, Jetpur and Kevdi villages in South Gujarat through previous research projects. More information about the villages and their situation is provided in Chapter 3 on “Village communities”. With these communities, I had an ongoing relationship which began in 1995, when I was working in that area as part of a University of Edinburgh research study. My research was part of a larger study that looked at Joint Forest Management Agreements throughout India. I was also involved in a Centre for International Forestry Research (CIFOR), Poverty Environment Network (PEN) research project in the same area and have access to information collected during that research. I provide more details about my relationship with these communities in the following sections.

2.5.1 Prior relationship with the region and pre-research meetings with the village community

In 1993, I was a Program Officer for the Aga Khan Rural Support Programme, located in a small town Netrang, approximately 45 kilometers from the research villages. The forestry programme of the organisation covered over 120 villages in the then districts of Bharuch and Surat. A couple of years later, as a Research Fellow of the University of Edinburgh, I set up a Research Unit in the village of Rupan, close to the town of Mandvi. The Range Forest Office of the area was also based in Mandvi. The research was on Joint Forest Management in Gujarat and included a year-long ethnographic study of a number of villages in Surat and Bharuch districts. During this
period, I was in close contact with the village communities, NGOs and Forest Department officers. In the field, I was in touch with local Range Forest Officers and Foresters. Moreover, I had occasional meetings with the Divisional Forest Officers and Conservators based at Rajpipla and Surat, respectively. Once in a while, I also met senior officers such as the Chief Conservator of Forests and the Principal Chief Conservator of Forests at Gandhinagar, the state capital (See Figure 4.2 for the organisational hierarchy of a typical state Forest Department and Appendix 1 for partial organisational chart of Gujarat).

Two years later, in 1997, I joined the Aga Khan Foundation, a funding agency, with programmes in four western Indian states that included Gujarat, allowing my continued meeting with some of the village communities with whom I had worked since 1993. I also travelled extensively in the tribal belt of Gujarat that was involved with the Joint Forest Programme, meeting a number of Divisional Forest Officers and Conservators of Forests. These meetings in Gujarat and three other states were conducted to develop a policy strategy for improving Joint Forest Management implementation (Chandran & Pastala 1998). The desired outcome was the creation of a JFM Cell at the state level, a collaboration between the Gujarat Forest Department and the Aga Khan Foundation (AKFI 2001). The Cell was created specifically to address the bottlenecks related to the implementation of Joint Forest Management in the state. Divisional Level Working Groups, State Level Working Groups, process and procedural changes, department training, state level planning and village level information dissemination using “horizontal communication” methods were some of the key functions. Horizontal communication was a term used by the JFM Cell for “people-to-people education”. During this period, my contact with the village communities continued and I facilitated many community leaders to share their experiences at the state level by requesting the organisers to call these leaders to present during state level meetings.

In 2005, I was selected by the Centre for International Forestry Research (CIFOR) to participate in a global research initiative on livelihoods under its Poverty Environment Network (PEN). The study aimed to estimate the extent to which rural
communities were dependent on forests for their livelihoods. I chose the same three villages, Makanjhar, Jetpur and Kevdi, to be part of the current research for this intensive study. The study ended in 2010, by which time I was already at University of British Columbia as a doctoral student.

My purpose of briefly sharing my experience related to this research area is twofold. One reason is to identify the effect of my previous relationships with the research subjects that might help and/or hinder me in carrying out unbiased doctoral research. The second reason is to position the underlying philosophies that drove me to undertake this research.

Having a relationship of trust with the community is often seen as an important step in research involving communities (Maclean & Cullen 2009). In my case, there was already a level of personal trust with the communities in the research area. I have attended quite a few traditional meetings held in many villages and forests of Mandvi, a rare invitation, as outsiders are seldom part of such ceremonial meetings. I have also attended and facilitated meetings between the Forest Department and the community. I believe that these shared experiences allowed me to have very open discussions on many sensitive issues. The discussions quite often culminated in the villagers asking for my personal opinion on issues. Some of these issues included conflicts in the village and politics that polarized households. The main advantage of my continued interactions was learning about many stories and incidents that an outsider would take a much longer time (or not know at all) to discover and learn about.

The downside of having a close relationship with the village community was that as a researcher I had to be that much more objective and had to avoid being unduly influenced by my previous knowledge of and experiences in the area. A major difficulty was to avoid frequenting houses and people with whom I was familiar. This was problematic, as not meeting them when I was in the village was seen by them as disrespectful and uncaring. In Makanjhar, another issue was the emergence of new factions. The old leaders were no longer in the Executive Committee of the
JFMC, but exerted considerable influence. The new leaders, most of them college educated, were from a younger generation and differed from the older members in their general outlook. Since my relationship was more with the previous elders, I had to make a special effort to meet with the new leaders. I could already see the leadership changes during my two preparatory visits to the field, when I was discussing the PhD research topic that I was planning to undertake.

The academic requirements for prior definition and formal agreement of the research scope limits the extent of participation and collaborative agreements that are possible in PhD research (Wulfhorst et al. 2008). Nevertheless, multiple meetings and discussions with communities in the research area prior to the research were attempted in an effort to frame the questions and to develop the questionnaire in a way that was relevant to the communities. I attempted to adopt a participatory approach to the extent possible within the confines of my academic situation. I discussed issues of communication in the co-management of forests with communities and with the senior IFS officers and local Range Forest Officers on a number of occasions. These discussions included the need to improve communication between Gamtalav village (a neighbouring village to Makanjhar) and the local Forest Department (personal observation, Gamtalav village, 2008) and communication between the Executive Committee of Makanjhar and the rest of the village (personal observation, Makanjhar village, 2008). These discussions helped me to partly conceptualize my research in terms of the requirements identified by the community, partly fulfilling some of the elements of participatory research (Fortmann 2009).

For the purposes of my PhD research, I visited the field areas in Gujarat three times. Two visits were undertaken before writing my proposal. The two pre-research meetings were in August 2007 and December 2008. During both these visits, I went to all the research villages, met the leaders and had individual and group discussions. These were unstructured discussions but were focussed on communication. These visits gave me abundant background material to reflect on
what questions I should ask during my research, and which methods would be the most effective.

2.5.2 Development of the questionnaire

I developed the questionnaire based on multiple considerations. The initial framework was based on the research design, which was a mix of theoretical considerations and practical solutions. I decided to collect data using multiple methods to allow for triangulation and to improve the possibility of getting high-quality information. The questionnaire was then discussed with a few individuals from the village community, who would later assist me in the survey as enumerators. This was possible as I finalized the questionnaire for the villagers in Gujarati while staying in the field in 2011 for a period of nine months. The survey questionnaire for senior IFS officers was prepared and administered in English. Both questionnaires were vetted by my supervisor. My University advisory committee members provided suggestions for the improvement of my community survey. These were incorporated in the version that was finally administered.

After I had developed a draft English version of the questionnaire, I translated it into Gujarati with the help of two development professionals who knew the language better than me. After translation, I tested the questionnaire with the community enumerators from the three research villages. The enumerators helped in rewording as well as simplifying many of the questions. While this was not a pre-test, it was a precursor to it, and helped get most of the questions into a form that was easily understood by community members.

Once the questionnaire was translated, it was formally pre-tested by the enumerators. By this time the enumerators were fairly conversant with the

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6 One of the primary issues was to translate the word “communication” as there was no equivalent in the local Gujarati language. After deliberations, three local words were used in conjunction to give meaning. This apart, additions and changes to the list of options in many of the survey questions were made.
questionnaire as we had discussed it several times. For the pre-test, they wrote answers to the questionnaire and also timed how long it took to complete. This also helped with re-checking the content and its translation, and in identifying any missing or unclear statements.

2.5.3 Community enumerators for the survey

I had surveyed Makanjhar and Kevdi in 1996 for a research project on Joint Forest Management in India conducted on behalf of the University of Edinburgh. In 2006, I had surveyed Makanjhar and Jetpur for the Poverty Environment Network (PEN) study with Centre for International Forestry Research (CIFOR). However, for my PhD research project, I decided to train enumerators selected from the communities. I did this to involve community members with the research and to impart skill sets to individuals from within the village community who could later undertake similar studies. It also was useful as they were much better placed for conducting the survey at the appropriate time, in their own language and with better understanding of the individuals.

The three female enumerators who administered the survey were from families well known in each of the three study villages. The enumerator from Makanjhar was married to a member of the GramPanchayat and is the niece of the former President of the JFMC. In Jetpur, the enumerator was the daughter of the then President of the JFMC. In Kevdi, the enumerator was running a shop and married to the manager of the local Anganwadi (child care centre). Jetpur and Kevdi are adjoining villages and have one JFMC between them.

The three enumerators who I chose to assist me with the survey had earlier received training from me for the CIFOR survey. The training involved an intensive one-day session followed by a field exercise. Many of the survey techniques were therefore already known to them. For the current research project, I undertook one-on-one

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7 A Gram Panchayat is the lowermost self-government institution at the village level.
training at each of their villages, where we completed the questionnaire using their own families as test situations. This apart, I accompanied them and observed as the questionnaires were administered to other community members.

2.5.4 Information sharing with the Forest Department

Throughout my research, I was in contact with the Gujarat Forest Department. In my two pre-research visits to Gujarat, in 2007 and 2008, I met Forest Department officials at the local office and also at their state headquarters in Gandhinagar, the State capital. I had mentioned to them the research subject that I was interested in and sought suggestions. As I had been part of the formation of the state level Joint Forest Management Cell in Gujarat that had a number of activities related to communication, my topic was seen as a progression to a more rigorous research-based understanding of the subject. The theme also synchronized with many of the ideas of senior forest department officers, especially with regard to better communication and information dissemination to village communities.

As the survey was being done in particular village communities, I was also updated on the situation in each of the villages and learnt about the current concerns faced by each community. As suggested by one of my University committee members, I discussed several aspects of the study with the Forest Department. For example, during discussions about Kevdi village, one major concern that emerged was that many families apparently were unsure if they were members of the JFMC as they felt excluded from the JFMC’s activities. Information gaps such as this became focal points for exploring some of the basic challenges in the system.

As my field research progressed, I also undertook structured interviews with a number of senior forest officers at Gandhinagar. These interviews aimed to determine whether my research could help in the development of a communication strategy for the State Forest Department. While this potential existed, I was aware of the limitations of my study and did not make any commitments other than promising to share the outcomes of my research. Later, towards the end of the field work, I was
invited to an internal Forest Department planning meeting of two forest divisions at the office of the Principal Chief Conservator of Forest. I shared some of my preliminary thoughts arising from my field work in these meetings. Before departing from the field, I also held brief thank you and feedback sessions in the three research villages.

In the following chapter, I describe my results from the community survey. This includes information from the village community on their experiences and perceptions of JFM. I focus on communication mechanisms that are used by the community and how it relates to the JFM programme.
CHAPTER 3: VILLAGE COMMUNITY

3.1 Introduction
This chapter showcases the Joint Forest Management situation at the village level. This information is based on three villages in South Gujarat - Makanjhar, Kevdi and Jetpur. In addition, I had access to over 20 years of field information from the region and was also privy to the historical context of the beginning of Joint Forest Management and its subsequent progress. The main agencies involved at the field level for implementation of JFM are the village communities, Forest Department and sometimes local NGOs. I looked at the processes adopted by these agencies and the interaction of the JFMCs with the Forest Department and NGOs. I examined the traditional and government-imposed institutional frameworks, rules and regulations. I also looked at the role and influence of other dominant institutions such as the panchayat. The decision-making roles of individuals, the participatory approaches adopted, and the micro-planning processes undertaken were also examined. Throughout this process I focused on the communication challenges and the formal and informal communication mechanisms that existed at the village level. The current level of communication as perceived by individuals within the villages is discussed.

This chapter is based on surveys and group discussions conducted in the research villages, discussions with key individuals, my own notes and extensive experience with the villages and the region since 1993, and secondary information.

3.2 Background
The Republic of India is the second largest country in population and the seventh largest in geography. Its natural ecosystems are extremely diverse, ranging from hot deserts to tropical rainforests to alpine ecosystems.

The vast range of Indian forests combines evergreen tropical rain forests in the North-Eastern states, the Western Ghats and the Andaman and Nicobar Islands to the south, to dry alpine scrub in the Himalaya to the North. Between the two extremes, the country has semi-evergreen rain forests, deciduous monsoon forests,
thorn forests, subtropical pine forests in the lower montane zone and temperate montane forests (Lal 1989).

Forestry is the second largest land-use in India after agriculture. An estimated 275 million people in rural areas depend on forests for at least part of their livelihoods. Forest dwellers, which include a high proportion of tribals, are among the poorest and most vulnerable groups in society (World Bank 2006). Apart from ‘tribe’ classified as a distinct social group, in India they have been accorded special legal status. According to the National Commission for Scheduled Tribes (India), certain communities suffering from extreme social and economic backwardness such as primitive agricultural practices, lack of infrastructure facilities, geographical isolation needed special consideration for safeguarding their interests. These communities were notified as Scheduled Tribes as per provisions of Article 342(1) of the Indian Constitution. A separate Ministry of Tribal Affairs (MoTA) has been constituted to look after the welfare and development of Scheduled Tribes. Half of India’s 89 million tribal people, the most disadvantaged section of society, live in forest fringe areas, and they tend to have close cultural and economic links with the forest (World Bank 2006).

3.3 Forest types and conditions
One of the important classifications of the tropical forests was developed for India and Burma, now Myanmar, by Champion (Champion 1937). It was republished for India in 1968 (Champion & Seth 1968). In this popular classification, 16 major forests types are recognised, subdivided into 221 minor types. Structure, physiognomy and floristics are all used as characters to define the types (Lal 1989). India has about 64 million hectares of forest cover allocated among dense (59 percent), open (40 percent), and coastal mangrove (1 percent) categories. Slightly more than 20% of India’s land base is classified as forest (World Bank 2006).

Forest ownership is concentrated in the public sector – 65% of the forest is administered solely by the government, and 27% is reserved for community and indigenous groups (through JFM) but still largely administered by government. Only
eight percent of forest land is managed by private individuals on farms or by large forestry firms (World Bank 2006).

Pressure on India’s forests come from a variety of sources, including (Bahuguna & Bhatia 2004; World Bank 2006):

- population increase, from 390 million in 1950 to 1 billion in 2001
- the loss of 4.5 million hectares of forest since 1950 through agricultural conversion and other uses
- the high percentage (78 percent) of forest subject to heavy grazing
- exposure of half of all forests to risk from fires
- shifting cultivation, which affects almost 10 million hectares of forest
- encroachment on 1.36 million hectares of forest by 2002, with evictions accounting for only 10 percent of affected land by 2004.

In recent years pressures from development projects and rezoning for non-forestry activities have added to the above pressures.

3.4 Location

Gujarat is a state in Western coast of India with a total area of 19.6 million ha which constitutes 5.96% of the geographical area of the country. It is situated between latitude 20° 07' to 24° 43' N and longitude 68° 10' to 74° 29' E (FSI 2011). The international border with Pakistan is to the north-west. The Arabian Sea makes up the state’s Western coast. Its capital, Gandhinagar is a planned city and is located near Ahmedabad, the commercial centre of Gujarat. The population of the Gujarat State was 60.38 million according to 2011 census data. The density of population is 308 persons per km². Geographically, the state is divided into three regions viz. the peninsula, traditionally known as Saurashtra, which is a hilly tract sprinkled with low hills; Kutch in the North-West, which is barren and contains the Rann of Kutch (salt marshes); and the alluvial plains from Aravalli foothills to the river Damanganga. There are four major rivers – the Sabarmati, Mahi, Narmada and Tapti (FSI 2011).
3.5 Brief history of the area and its human settlement

Gujarat history dates back to more than 3500 years. Archaeological findings of the ancient Harappa and Mohenjo-Daro civilization are found in the state. Gujarat has a long history of rulers in different times. It has witnessed war between the Mughals and the Marathas. In 1514 the Portuguese traveller, Duarte Barbosa, described Surat as an important seaport, frequented by many ships from Malabar and various parts of the world. During the reigns of the Mughal emperors, Surat became the chief commercial city of India (Pletcher 2010).

In 1608, ships from the British East India Company started docking in Surat, using it as a trade and transit point. The British set up their first commercial outpost in the 16th century in Surat. During the British rule, Gujarat was part of the Bombay presidency and was ruled from Mumbai. It became a separate state in 1960 when the States were demarcated on the basis of language (Chokshi & Trivedi 1991).

Leaders such as Mahatma Gandhi, Sardar Vallabhbhai Patel, Morarji Desai, K.M. Munshi, Narhari Parikh, Mahadev Desai, Mohanlal Pandya, Bhulabhai Desai and Ravi Shankar Vyas hail from Gujarat. Gujarat was also the site of some of the most popular revolts, including the Satyagrahas (commonly known as nonviolent resistance) in Kheda, Bardoli (in Surat district), Borsad and the Salt Satyagraha (started in South Gujarat) during the struggle for Independence (GIDB 2014).

3.6 Demographics

The rural population of Gujarat constitutes 57.42% and Scheduled Tribes, which spread over 8 districts, comprise 14.8% of the total population. Approximately 89.1% of the population are Hindu and 9.1% are Muslims. Jains comprise 1.0% and Sikhs 0.1% of the State population (Census 2001). Specifically in South Gujarat, one sees some migration patterns in the poorer districts for employment and livelihood to urban centres. Even when people move for longer time periods they keep strong family ties with their village and share resources.
3.7 The JFM program in Gujarat

According to the Forests and Environment Department of Gujarat “efforts by the Forest Department to protect the forest resource in isolation resulted in conflicts with the locals and more damage to the resource and ultimately its degradation. Realizing the situation, efforts to involve local people in the protection and regeneration of the forests were initiated in south Gujarat, especially in the Vyara and Rajpipla forest divisions in the year 1986-87. This was based on the principle of care and usufructs benefits. The results were encouraging not only in the protection and regeneration of the forest resource but also in reducing the conflicts between the locals and departmental personnel” (GOG 2014b).

“Based on the National Forest Policy, 1988, and the guidelines thereon from the Government of India in June, 1990 regarding the involvement of the local communities and voluntary agencies in forest protection, management and regeneration to rejuvenate degraded forest lands, the Joint Forest Management (JFM) programme was launched in Gujarat through a government resolution in March 1991. Since then activities involving the people in the protection and regeneration of forests have been expanded to other areas. Thus a decentralized approach of participatory management based on the broad principal of “Care and Share” is under progress and increasingly gaining recognition and acceptance as a major strategy for the eco-restoration and rehabilitation of the degraded forest land in the State” (GOG 2014b).

The salient features of the Government Resolution 1991 (Gujarat) as modified in 1994 and 2000, are mentioned on the website maintained by the Gujarat Forests and Environment Department (GOG 2014d):

- Applicable to degraded forest areas only
- State Level Working group for policy level inputs, represented by officials, NGOs and Academic Institutions, which generally meets once in every six months.
- District Level Working Committees (for solving operational problems and resolving local conflicts) represented by officials, NGOs and Village Level Organisations (VLO's), which meets once in every two months.

- Community participation at village level. Implementation through a specially created Village Level Organisation (VLO). Minimum 60% of families of the village to join a VLO to make it eligible for Joint Forest Management.

- Gram Panchayat may also act as a VLO.

- VLOs to be registered as co-operative societies under "The Societies Act ".

- The Executive Committee will have at least two women members and a representative of the Panchayat, one representative of an NGO (where NGO is facilitating ), one representative of a funding agency (if any)

- Involvement of NGOs (wherever associated/possible) for HRD support and organising the VLOs. The role of Human Resource Development support by Gujarat Forest Department in the absence of NGOs.

- Action Plan prepared for approval by the Deputy Conservator of Forests. Working scheme before harvesting. No working without a sanctioned Working Scheme.

- Benefits to the members of VLO :
  - 100% usufruct benefits of intermediate products (non-wood).
  - 50% sharing of wood products between the Forest Department and VLO. -
  - 50% sharing of net profit of final timber harvest.
  - No monitory benefit to NGOs.

- Provision of agreement between the FD and VLOs.

- Provision of cancellation of Adhikar Patras, agreement or disqualifying VLO by Deputy Conservator of Forests without any compensation.

  Provision of appeal against the decision of Deputy Conservator of Forest to Conservator of Forest.
In 2005, JFM was extended to high forest areas having a tree density above 40% (tree crown cover) and the share for the JFMC was decided at 16% of the net profit (GOG 2014a).

The government website also mentioned that by March 2012, 3259 JFMCs were managing 425,000 hectares of forest, which is 24% of the total forest area of (GOG 2014a)

3.7.1 The study area

The three research villages; Makanjhar, Kevdi and Jetpur are located in the Surat District of Gujarat state of India (Figure 3.1). They fall under the Mandvi Tehsil (or Taluka). Tehsil is a smaller administrative unit under the District and is administered by the Tehsildar (the revenue administrative officer of the Tehsil). Mandvi is also the location for the two Range Forest Offices (North and South).
Mandvi does not have a railway station and the nearest railhead is at Bardoli about 30 kilometres from Mandvi. However, not many trains run through this station and Surat, about 75 kilometres away from Mandvi, is the main rail head. Surat is also the administrative headquarters for the Revenue Department's Collectorate office, Forest Department's Conservator's office and the newly relocated Divisional Forest Office.

My first visit to the current research area was in 1995 as part of a University of Edinburgh research project on Joint Forest Management. Our team was scouting the area to select villages for the study. We contacted the local Range Forest
Department and together discussed possible villages. Makanjhar, Jetpur and Kevdi were some of the villages that were chosen for study. Jetpur and Kevdi did not have any JFM then as the forest was not degraded - a requirement for having JFM at that time. In later years, Jetpur and Kevdi also adopted JFM after changes in policy allowed for JFM in high forest in 2005. Rather than having two committees, the Forest Department decided to have one JFMC for the two adjoining villages for administrative reasons. This decision was top down rather than participatory and many people in Kevdi village are unhappy about it.

### 3.7.1.1 Makanjhar

Makanjhar village is about 7 km from Mandvi and is situated en route to Zankhvav on the State Highway. The village settlement is 3 km from the state highway and a narrow road goes from the State Highway passing through the village and ending at the Lakhigam Dam that adjoins the last hamlet of Makanjhar. The population was 102 households in 1995 (PRA 1995). Makanjhar predominantly comprises Chaudhari tribe.

Makanjhar is a revenue village with a total area of 620.66 ha, of which the total Reserved Forest area is 310 ha. Revenue villages are administered by the revenue officers in contrast to forest villages which are administered by the forest department. Agriculture is the main occupation. Some people also grow vegetables if they have access to irrigation. The main sources of water for irrigation are wells equipped with diesel or electric pumps. Some farms also get water from the Lakhigam Dam.

The village has some basic government facilities such as a primary school and a mid-day meal centre. There are also privately run shops for daily necessities and flour-mills.

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8 Discussions with community in Kevdi village in 2007.

9 PRA (Participatory Rural Appraisal) was conducted as a part of a research by the University of Edinburgh research on JFM.
**3.7.1.2 Jetpur and Kevdi**

Jetpur and Kevdi are adjoining villages. Kevdi village is about 17 km from Mandvi and falls on the Mandvi – Zankhvav – Pipalwada road. The approach to the village is by a semi metalled road that goes through the villages and ends at the Kevdi Dam. Jetpur Round Office is the office of the Round Forest Officer of Jetpur Round and is situated between Jetpur and Kevdi. The Round Office also has living quarters for the Forester and the Beat Guards along with a small warehouse.

Both villages have Scheduled Tribes belonging to Vasavas and Chaudhari though the villages are predominantly Vasava. Unlike Kevdi, which is a revenue village, Jetpur is a forest village and hence does not have any boundaries as Kevdi has. The total area of Kevdi village is 139.52 ha.

**3.7.1.2 Demographic profile of sample**

Of the total sample surveyed, 81.5% were men and 18.5% were women. The sample had 78.2% Hindus, 20.2% Christians and 1.7% did not answer. The village of Makanjhar did not have any Christians. 56.3% of the sample consisted of Vasavas and 43.7% Chaudharies. There were no Vasavas in Makanjhar. 63% of the respondents were classed as Below Poverty Line (BPL), 32.8% from Above Poverty Line (APL) and 4.2% did not answer. The sample had 16% respondents who had been Executive Members of the JFMC at some point. 95.8% mentioned that they had worked with the Forest Department for wage labour. Four respondents from Kevdi and Jetpur mentioned that they had also worked as watchmen. 46.2% of the sample had no schooling and 34.5% had primary education (Table 3.1)
3.7.2 The situation of perplexity

Traditionally, forests were managed by the local community until the advent of centralised management starting from late 18\textsuperscript{th} century. Historical details of this shift are narrated in Chapter 5. The shift reduced access of local communities to forests and at the same time the large-scale cutting of forests began. This led to rapid degradation of forests, and conflict between the village community and the local Forest Department. Initiation of the JFM program in 1990 was the first instance after a long period for the local community to be formally engaged in the management of forests. I consider the situation before JFM program as the “perplexity” stage. There appeared to be a state of continuous degradation of the forests leading to problem for the community to access forest resources.

3.7.2.1 Access to forest and forest products

Historically local communities had access to forest produce with few limitations. This had become increasingly curtailed (Guha 1983). JFM was seen by many proponents as a means for the village community to get access and control of the forest produce. In the study villages, 57\% percent of the respondents mentioned that they faced problems accessing the forest and collecting forest produce before JFM and 40\% said they did not face any problems. Most of the respondents who did not face any problems were from Kevdi village (approximately 93\%). Kevdi village is next to a large area of forest that has not been degraded to the same extent as has happened in other areas. This gives the villagers easier access to the collection of forest produce.
produce. Indeed, JFM was not practiced in the village initially as the original circular from the government mentioned that the JFM programme was restricted to degraded forest areas. It was only when JFM was introduced to areas with high forests in 2005 that villages such as Kevdi were able to adopt it (GOG 2014a).

Jetpur, which adjoins Kevdi village, could have had a similar situation. Being a forest village, Jetpur is also surrounded by forests. However, the Forester’s office and residence is adjacent to the village, and this could have been a deterrent. Comments from respondents from Makanjhar mention being stopped by the Forester and Beat Guards when they went to get wood. There was a fear of the watchman and the Beat Guards as they used to fight with the community members if they were seen taking firewood, grazing in the forest or if they cut timber for house construction. In Jetpur, community members mentioned that they also had difficulty getting mud, stone and sometimes medicinal herbs.

A lack of employment in Makanjhar village was mentioned as one of the major issues. This not only increased fire wood and timber extraction for subsistence use but also for cash. Increased use, causing increased degradation created more difficulties. The practice of clear-cutting of forests followed by inadequate regeneration prior to JFM, in the area, also increased degradation in the forests near Makanjhar.

3.7.3 Consultation

3.7.3.1 Information about JFM adoption in the village

The information about the JFM programme was introduced to the study villages by the local Forest Department officers. A few elites in the villages already had information about the programme from discussion with leaders from other villages and also from their own contact with the Forest Department. For example, a son of one of the leaders of Makanjhar village was a clerk in the Range Forest Office. Typically, the Forest Department introduced the concept of JFM in the traditional

\textsuperscript{10} Later another of his sons became a Forester.
meetings, especially in the case of Makanjhar village. This was far more effective than calling separate meetings, as in the traditional meetings, conducted as part of village ceremonies, all families were represented\textsuperscript{11}. As a result, junior officers were able to inform the community more effectively through these traditional meetings. Traditional meetings are held in a designated forest area near the village. When senior officers attended village meetings, the meetings were organised in the village. These village meetings were conducted in any area that was a general gathering place or a place that could hold many people. Quite often these could also be held in the main leader’s house. In general, people who are local and trusted are the ones who are called to these exclusive traditional meetings. There was no direct involvement of the village community in the development of the framework for JFM. Adequate discussions on the modalities and processes were never conducted with the community and even after two decades no clear process diagrams have been developed by the Forest Department for JFM. The JFM programme started with a lot of trust rather than informed understanding of future steps.

Overall 87\% of the respondents from all the three villages reported being aware that JFM was going to be introduced in the village (Table 3.2 and 3.3). In Makanjhar, 74\% of the respondents were aware that JFM was going to be adopted by the village as traditional meetings were used. On the other hand it is also remarkable that so many knew, especially since it was a new concept. Makanjhar was one of the first villages to adopt JFM in the year 1991, and they already had a committee to protect the forest in 1987, before the Gujarat JFM resolution in 1991. In the other two villages, which adopted JFM in 2007, more than 90\% of the people were aware that

\textsuperscript{11} I had attended these meetings in 1996 and 1997. I was invited to the meeting by the village elder to speak about my then research project. The monthly meetings were conducted in a special place, a place where Dev (God) resides, away from the village and in the forest. All members sat around in a circle. These meetings were all men and if the man of the house couldn’t attend, a boy was sent from the household. In later years, during field work in 2011, I learnt that such meetings continued, but the attendance had reduced.
JFM was going to be adopted, probably because by 2007 the awareness of JFM in general was high across the region.

Table 3.2 Percentage of respondents aware that JFM was introduced—percentage per village

<table>
<thead>
<tr>
<th>Village</th>
<th>Yes</th>
<th>No</th>
<th>Did not Ans</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Makanjhar</td>
<td>73.8%</td>
<td>26.2%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Kevdi</td>
<td>97.6%</td>
<td>0%</td>
<td>2.4%</td>
<td>100%</td>
</tr>
<tr>
<td>Jetpur</td>
<td>91.4%</td>
<td>8.6%</td>
<td>0%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 3.3 Percentage of respondents aware that JFM was introduced—combined

<table>
<thead>
<tr>
<th>Village</th>
<th>Yes</th>
<th>No</th>
<th>Did not Ans</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Makanjhar</td>
<td>26.1%</td>
<td>9.2%</td>
<td>0%</td>
<td>35.3%</td>
</tr>
<tr>
<td>Kevdi</td>
<td>34.5%</td>
<td>0%</td>
<td>0.8%</td>
<td>35.3%</td>
</tr>
<tr>
<td>Jetpur</td>
<td>26.9%</td>
<td>2.5%</td>
<td>0%</td>
<td>29.4%</td>
</tr>
<tr>
<td>Total</td>
<td>87.4%</td>
<td>11.8%</td>
<td>0.8%</td>
<td>100%</td>
</tr>
</tbody>
</table>

3.7.3.2 Opinions about adopting JFM

As JFM was introduced in the villages, the main benefits, as outlined by the Forest Department and NGOs, were sketchy. No written documents were given to the villages and all discussions were verbal. The main benefit that was mentioned in these meetings was a share in the timber at a future date followed by labour employment and other benefits from silvicultural activities and plantation works. Some of the silvicultural activities, such as thinning and coppicing, also generated firewood that was immediately available to the community. In a nearby village, Gamtalav, after a year of protection, the forest cleaning operation yielded about 12 tonnes of firewood (Pathan et al. 1991). Another main attraction arising from the protection of the forest was the abundant re-growth of grass in areas that were protected from free grazing. Grass, used as fodder, increased in production for many years and often doubled in production each year, until the newly planted tree seedlings matured and the canopy started closing. The cash values of these grass
harvests were substantial for the community. This apart, the feeling of control that came with being in charge of protecting the forest and being part of decision-making was radical and very motivating\textsuperscript{12}. The very act of the Forest Department officers interacting with the village community and discussing about the forest and its management was a unique departure. Some of these villages were able to exhibit outstanding successes and many villages in the region such as Pingot, Bapda, Balethi and Motia received the Priyadarshini Vriksha Mitra Award from the Government of India in recognition of their good work in protecting and regenerating the forests (GOG 2014c).

Makanjhar had the highest number of dissenting respondents, with 12\% who felt at that time that adopting JFM was not the right thing to do and 14\% being uncertain. This could be due to the newness of the programme and hence an initial scepticism (Table 3.4).

\textbf{Table 3.4 Percentage of respondents who had agreed that adopting JFM was the right thing to do- percentage per village}

<table>
<thead>
<tr>
<th>Village</th>
<th>Opin on JFM adopt</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Makanjhar</td>
<td>69.0%</td>
</tr>
<tr>
<td>Kevdi</td>
<td>97.6%</td>
</tr>
<tr>
<td>Jetpur</td>
<td>94.3%</td>
</tr>
</tbody>
</table>

Nevertheless, a general consensus was present among the people in favour of the adoption of JFM. Overall, 87\% of the respondents based on their then understanding agreed that adopting JFM was the right thing to do, with 6\% not agreeing and 5\% unsure (Table 3.5).

\textsuperscript{12} As mentioned by leaders from the research villages during discussions.
Table 3.5 Percentage of respondents who had agreed that adopting JFM was the right thing to do - combined

<table>
<thead>
<tr>
<th>Village</th>
<th>Opin JFM adopt</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes (%)</td>
<td>No (%)</td>
</tr>
<tr>
<td>Makanjhar</td>
<td>24.4%</td>
<td>4.2%</td>
</tr>
<tr>
<td>Kevdi</td>
<td>34.5%</td>
<td>0%</td>
</tr>
<tr>
<td>Jetpur</td>
<td>27.7%</td>
<td>1.7%</td>
</tr>
<tr>
<td>Total</td>
<td>86.6%</td>
<td>5.9%</td>
</tr>
</tbody>
</table>

3.7.4 Institutions created

The Gujarat resolution of 1991 recommended the formation of village institutions. These village institutions are generically called Van Kalyan Samiti (VKS) by the Forest Department in Gujarat. Other names are also used such as Van Vikas Samiti (VVS) and Gram Vikas Mandal (GVM). They are also referred to generically as the Village Level Organisation (VLO) or the JFM Committee (JFMC). In fact, the MoEF in one of their initial documents on JFM had suggested using the name JFMC across India (MoEF 2014). I use the name JFMC for the village level organisation and the name Executive Committee for the committee that manages the JFMC.

While all JFMCs are “registered” with the Forest Department at the office of the Deputy Conservator, many are also registered with the Registrar of Cooperative Societies. When JFMCs are registered with the Registrar of Cooperative Societies they get legal status as a separate entity, which is lacking when registered with the Forest Department. The state government data for JFM status in Gujarat for the year ending in 2005 are shown in Table 3.6 (GOG 2014c). Notice that the number of JFMCs registered with the Registrar of Cooperative Societies (488) is far less compared to the total number of JFMCs (1734). While registration with the Forest Department is the basis for the formation of a JFMC, getting registered under the Registrar of Cooperative Societies and getting Adhikar Patra (record of rights) take many years after a JFMC formation. Hence the numbers do not match with the number of JFMCs formed (Table 3.6). Adhikar Patra has details about the area of forest that is being protected by the JFMC. The document often mentions only a portion of the forest being protected.
3.7.4.1 JFMC formation

The Forest Department conducted meetings in the research villages to form JFMCs. Since Makanjhar was one of the initial JFM villages, the village had a number of meetings with the Foresters and the Range Forest Officers. Many senior officers such as the Divisional Forest Officers and the Conservator of Forests had also visited the village. Makanjhar was also influenced by the then Conservator of Forests, R.S. Pathan who initiated mass mobilization through rallies. He had conducted discussions with numerous villages in the region prior to the formal notification of JFM by the Gujarat Government.

Most JFM institutions are generally based on individual villages in Gujarat. While Makanjhar has one JFMC, Kevdi and Jetpur have a common JFMC. The creation of formal institutions and their management was not new to the villages as there were other existing institutions such as the Milk Cooperatives and the Fish Cooperatives. Nevertheless, the JFM institution was new as it had to function in association with the Forest Department to decide about management of the forest. The Executive Committee of the JFMC had 6 to 10 members with at least 2 women members. If needed the Forester could be appointed as Secretary of the JFMC. In the study villages the Secretaries were from the community.
Respondents were asked if there were regular election/selection/nomination of office bearers. Approximately 30% mentioned that these were never held, followed by 22% who mentioned it as “sometimes” (Table 3.7). However, all those saying “never” came from Kevdi (Table 3.8). As mentioned before, the JFMC is common to both Jetpur and Kevdi villages. There are indications of conflict between these two villages and possibly a majority of the community in Kevdi are not informed.

Table 3.7 Regular election/selection/nomination of office bearers, percentage response combined across all villages

<table>
<thead>
<tr>
<th>Election</th>
<th>Village</th>
<th>Makanjhar</th>
<th>Kevdi</th>
<th>Jetpur</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Always</td>
<td></td>
<td>0%</td>
<td>0%</td>
<td>2.5%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Quite Often</td>
<td></td>
<td>0%</td>
<td>0.8%</td>
<td>19.3%</td>
<td>20.2%</td>
</tr>
<tr>
<td>Sometimes</td>
<td></td>
<td>16.8%</td>
<td>0%</td>
<td>5.9%</td>
<td>21.8%</td>
</tr>
<tr>
<td>Rarely</td>
<td></td>
<td>11.8%</td>
<td>3.4%</td>
<td>0.8%</td>
<td>16.0%</td>
</tr>
<tr>
<td>Never</td>
<td></td>
<td>0%</td>
<td>30.3%</td>
<td>0%</td>
<td>30.3%</td>
</tr>
<tr>
<td>Did not Ans</td>
<td></td>
<td>5.9%</td>
<td>0.8%</td>
<td>0.8%</td>
<td>6.7%</td>
</tr>
<tr>
<td>Don’t Know</td>
<td></td>
<td>2.5%</td>
<td>0%</td>
<td>0%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>35.3%</td>
<td>35.3%</td>
<td>29.4%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 3.8 Regular election/selection/nomination of office bearers, percentage response across each village

<table>
<thead>
<tr>
<th>Election</th>
<th>Village</th>
<th>Makanjhar</th>
<th>Kevdi</th>
<th>Jetpur</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Always</td>
<td></td>
<td>0%</td>
<td>0%</td>
<td>8.6%</td>
<td></td>
</tr>
<tr>
<td>Quite Often</td>
<td></td>
<td>0%</td>
<td>2.4%</td>
<td>65.7%</td>
<td></td>
</tr>
<tr>
<td>Sometimes</td>
<td></td>
<td>45.2%</td>
<td>0%</td>
<td>20.6%</td>
<td></td>
</tr>
<tr>
<td>Rarely</td>
<td></td>
<td>33.3%</td>
<td>9.5%</td>
<td>2.9%</td>
<td></td>
</tr>
<tr>
<td>Never</td>
<td></td>
<td>0%</td>
<td>85.7%</td>
<td>6%</td>
<td></td>
</tr>
<tr>
<td>Did not Ans</td>
<td></td>
<td>14.3%</td>
<td>2.4%</td>
<td>2.9%</td>
<td></td>
</tr>
<tr>
<td>Don’t Know</td>
<td></td>
<td>7.1%</td>
<td>0%</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

When asked when the last election was held, Kevdi respondents indicated that it was in 2004, whereas Jetpur respondents claimed that it was in 2011. In Makanjhar 47% of the respondents did not know when the last election was conducted and the
answers ranged from 2000 to 2010. There was considerable uncertainty as to when the last election was held, indicating that information about elections has not been relayed adequately to all households. In all the villages the predominant way of Executive Committee selection was “meetings” rather than “vote” with 94% of the respondents mentioning it as the way the members were selected.

3.7.4.2 JFMC meetings
While there were no guidelines for meetings, it was expected that they would be held regularly, at least once every two months or preferably every month. One General Body Meeting (GBM) every year is mandatory for all societies. This is also the meeting when the election of the Executive Council members generally takes place. When asked about attendance in previous GBMs, 42.9% percent of the respondents stated that they attended meetings “quite often”, followed by 37% who “rarely” attend (the other categories were 1.7% always, 9.2% sometimes, 3.4% rarely and 5.9% did not answer). Most of the “rarely” attend (95%) came from Kevdi, again suggesting an issue between Kevdi and Jetpur (Table 3.9).

Table 3.9 Respondents attending JFMC GBM, percentage response across each village

<table>
<thead>
<tr>
<th>Attend Samiti GBM</th>
<th>Village</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Makanjhar</td>
</tr>
<tr>
<td>Always</td>
<td>0%</td>
</tr>
<tr>
<td>Quite Often</td>
<td>57.1%</td>
</tr>
<tr>
<td>Sometimes</td>
<td>14.3%</td>
</tr>
<tr>
<td>Rarely</td>
<td>4.8%</td>
</tr>
<tr>
<td>Never</td>
<td>9.5%</td>
</tr>
<tr>
<td>Did not Ans</td>
<td>14.3%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

3.7.5 Bureaucracy

3.7.5.1 Access to timber for house building
57% of the respondents found it “very easy” to get timber followed by 27% who found it “difficult” (others were 10.1% easy, 4.2% neutral, 0.8% did not answer and
0.8% extremely difficult). All those finding it “very easy” came from Kevdi and Makanjhar, whereas those finding it “difficult” came from Jetpur and Makanjhar. It is important to note that Jetpur and Kevdi are adjoining villages. While most people in Makanjhar find it easy (93% there found it “easy” or “very easy”), there are a few who found it “difficult” (Table 3.10). Substantial numbers of respondents from well-off households found it difficult to get timber (49%). I used the government recognised categories of “Below Poverty Line” and “Above Poverty Line” to categorise those who are affluent.

Table 3.10 Access to timber for house building, percentage response across each village

<table>
<thead>
<tr>
<th>Ease of getting timber</th>
<th>Village</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Makanjhar</td>
<td>Kevdi</td>
<td>Jetpur</td>
<td></td>
</tr>
<tr>
<td>Very Easy</td>
<td>64.3%</td>
<td>97.6%</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Easy</td>
<td>28.6%</td>
<td>6%</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Neutral</td>
<td>0%</td>
<td>0%</td>
<td>14.3%</td>
<td></td>
</tr>
<tr>
<td>Difficult</td>
<td>7.1%</td>
<td>0%</td>
<td>82.9%</td>
<td></td>
</tr>
<tr>
<td>Extremely Difficult</td>
<td>0%</td>
<td>0%</td>
<td>2.9%</td>
<td></td>
</tr>
<tr>
<td>Did not Ans</td>
<td>0%</td>
<td>2.4%</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

When asked “How often did you require timber for house building from your forest?”, 52.1% replied “quite often” followed by 31.1% who replied “rarely” (others were 15.1% sometimes, 1.7% did not answer). Almost all those in the “quite often” (98%) category came from the villages of Kevdi and Makanjhar. Those replying “rarely” all came from Jetpur and Makanjhar (Table 3.11).
71

Table 3.11 Frequency of requirement of timber for house building, percentage response across each village

<table>
<thead>
<tr>
<th>Requirement of timber</th>
<th>Village</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Makanjhar</td>
</tr>
<tr>
<td>Quite Often</td>
<td>47.6%</td>
</tr>
<tr>
<td>Rarely</td>
<td>21.4%</td>
</tr>
<tr>
<td>Sometimes</td>
<td>28.6%</td>
</tr>
<tr>
<td>Did not Ans</td>
<td>2.4%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

3.7.5.2 Permission for timber extraction for individual needs

A request for timber was “never” or “rarely” put to either the JFMC (91%) or the Forest Department (81%). 0.8% “quite often” requested the JFMC for timber, 6.7% “sometimes” and 0.8% “did not answer”. To the Forest Department, 1.7% requested “quite often” and 16.8% “sometimes” and 0.8% did not answer. The few who did make such requests did so verbally (66.2%), with a few doing so in writing (12.2%). 17.6% of those responding requested in both written and verbal form and 4.1% did not answer (Table 3.12). 66% of the respondents who had made previous requests had made their most recent request to the JFMC and 16% to the Forest Department; 16% had done so to both.

Table 3.12 Percentage respondents who used verbal and written requests

<table>
<thead>
<tr>
<th>How requested</th>
<th>Village</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Makanjhar</td>
</tr>
<tr>
<td>Verbal</td>
<td></td>
</tr>
<tr>
<td>Both</td>
<td></td>
</tr>
<tr>
<td>Written</td>
<td>2.7%</td>
</tr>
<tr>
<td>Did not Ans</td>
<td>2.7%</td>
</tr>
<tr>
<td>Total</td>
<td>50.0%</td>
</tr>
</tbody>
</table>

96% of the respondents who had requested wood indicated that their request had been accepted. The data suggests that while the JFMC and Forest Department have processed most of the requests they received; most of the respondents do not
bother to make such requests\textsuperscript{13}. At the same time about 60% of the respondents mention they paid a fine at some point of time to the Forest Department – approximately 13% said that they did so “quite often” (Table 3.13). Most (86.7%) of the “quite often” responses come from Kevdi village. 79.1% of those who said “never” were from Makanjhar village (Table 3.14). Proximity to the forest and the general antagonism between Jetpur and Kevdi may explain the situation in Kevdi.

Table 3.13 Frequency of paying fines for cutting timber

<table>
<thead>
<tr>
<th>Fine for timber</th>
<th>Makanjhar</th>
<th>Kevdi</th>
<th>Jetpur</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quite Often</td>
<td>1.7%</td>
<td>10.9%</td>
<td>0%</td>
<td>12.6%</td>
</tr>
<tr>
<td>Sometimes</td>
<td>0%</td>
<td>3.4%</td>
<td>0%</td>
<td>3.4%</td>
</tr>
<tr>
<td>Rarely</td>
<td>3.4%</td>
<td>13.4%</td>
<td>27.7%</td>
<td>44.5%</td>
</tr>
<tr>
<td>Never</td>
<td>28.6%</td>
<td>6.7%</td>
<td>0.8%</td>
<td>36.1%</td>
</tr>
<tr>
<td>Did not Ans</td>
<td>1.7%</td>
<td>0.8%</td>
<td>0.8%</td>
<td>3.4%</td>
</tr>
<tr>
<td>Total</td>
<td>35.3%</td>
<td>35.3%</td>
<td>29.4%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 3.14 Frequency of paying fines for cutting timber between villages

<table>
<thead>
<tr>
<th>Fine for timber</th>
<th>Makanjhar</th>
<th>Kevdi</th>
<th>Jetpur</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quite Often</td>
<td>13.3%</td>
<td>86.7%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Sometimes</td>
<td>0%</td>
<td>100%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Rarely</td>
<td>7.5%</td>
<td>30.2%</td>
<td>62.3%</td>
<td>100%</td>
</tr>
<tr>
<td>Never</td>
<td>79.1%</td>
<td>18.6%</td>
<td>2.3%</td>
<td>100%</td>
</tr>
<tr>
<td>Did not Ans</td>
<td>50.8%</td>
<td>25.0%</td>
<td>25.0%</td>
<td>100%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td>100%</td>
</tr>
</tbody>
</table>

\textsuperscript{13} Local forest officers cannot allow the JFMC to cut timber from the forest based on individual requests. In practice, certain discretionary decisions are made for genuine reasons, like few poles for house maintenance. According to some forest officers this discretion is necessary to maintain the relationship with the JFMC. This practice is not encouraged and is limited. Officers suggest a shorter felling series of 10 to 15 years so that villagers can get the benefit rather than the current 15 to 20 years (and longer) by which time increased illicit cutting impact both the forest and the morale of the JFMC.
3.7.6 Community perception about communication

3.7.6.1 Reasons and frequency for communicating with the forest department
Respondents were asked to list reasons for communicating with the Forest Department. The most quoted reason for communication was when the respondents sought forest labour work with the Forest Department. On such occasions there were interactions with the Forest Department staff. The other reasons mentioned were activities in the village that have been supported by the Forest Department, such as construction of pipelines, check dams, tanks, specifically in Makanjhar. Some respondents mentioned that while doing protection work or grazing cattle in the forest, there were occasions when they interacted with Forest Department personnel. Many mentioned that communication also occurred during village meetings. The other occasion mentioned was during excursions conducted by the Forest Department.

When asked how often the respondent or their family communicated with the Forest Department, 58.8% of the respondents said that it was “quite often”, 22.7% said “sometimes”, and 13.4% said “rarely”. Only 2.5% said that they had never communicated and 1.7% did not answer.

The data suggest that most interactions and communication occur in work settings in the forest, when the Department is employing community members for daily wage.

3.7.6.2 With whom in the Forest Department did the community members communicate?
53% of the respondents mentioned that the last time they had communicated with the Forest Department was with the Beat Guard and the Forester. 19.8% of the respondents indicated that it was exclusively with the Beat Guard. Some mentioned communicating with, both the watchman and the Beat Guard (1.7%), the Range Forest Officers and Foresters (4%) and communicating with the watchman was mentioned by one respondent. This suggests that while both, the Beat Guard and the Forester seem to be the main officers in the Forest Department that community members communicate with, the Beat Guard is the primary contact.
3.7.6.3 **How did the communication with the Forest Department happen?**

For 93% of the respondents, the last communication with the Forest Department occurred verbally. Only one respondent mentioned having a written communication. 6% did not answer. 65.5% of the respondents who had communicated mentioned that their last communication was during a village meeting; 20.7% had interacted in the forest, 9.5% at a Forest Department office, 2.6% at home, 0.9% village meeting and home and 0.9% did not answer.

3.7.6.4 **Primary reason for communication with the Forest Department**

For the majority of correspondents, the primary reason for their last communication with the Forest Department was stated as a “village meeting”. The next most important reason was “for forest protection”. Other reasons mentioned included “labour works”, “about fodder” and for “information regarding JFMC”.

3.7.6.5 **Use of different sources of information**

The respondents were asked to rank the frequency with which they get information on policies, rules and programmes of the Forest Department from different sources. By allotting weights to the responses (Always=4, Quite Often=3, Sometimes=2, Rarely=1, Never=0), a weighted preference to a listed 50 different sources was possible (Table 3.15). The higher the score, the more frequently the communication source was used for information related to forest.

**Table 3.15 Sources of information and frequency of use scores**

<table>
<thead>
<tr>
<th>Score</th>
<th>List of sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>301-350</td>
<td>village meeting, traditional village meeting</td>
</tr>
<tr>
<td>251-300</td>
<td>friends, village elder, husband/wife, relatives, Beat Guard, Forest Department office</td>
</tr>
<tr>
<td>201-250</td>
<td>family member, Religious Group (bhajan mandal), Forester, JFMC member, marriages/engagements, panchayat meetings, Women’s Group (mahila mandal)</td>
</tr>
<tr>
<td>151-200</td>
<td>while engaged in forest labour work, notice board, training programme, self help group, political meetings, study tour, Asst. Conservator of Forests, radio, village worker (gram sevak), meeting with other successful committees, fairs</td>
</tr>
<tr>
<td>101-150</td>
<td>market, NGO meetings, FD Range Office, DLWG meetings, Tribal Development Office, FD Round office, Mamlatdar office, Range Forest Officer, NGO worker, television, Mandvi project office</td>
</tr>
<tr>
<td>51-100</td>
<td>Divisional Forest Officer, newsletter, newspaper, VCF, NGO office, Forest Development Agency meetings, movies, information booklet</td>
</tr>
<tr>
<td>0-50</td>
<td>Internet, email, SubDivisional Magistrate office</td>
</tr>
</tbody>
</table>
The regular village meetings followed by the traditional village meetings (called *ujjamani*\(^\text{14}\)) were reported as the primary sources of information exchange. The Beat Guard and offices of the Forest Department were seen as most frequented source of information from the Forest Department. The least important sources were the internet, email and the Sub-Divisional Magistrate’s office.

### 3.7.7 Perceptions about the ability to communicate with the Forest Department

#### 3.7.7.1 Does Forest Department officials listen?
Respondents were asked if “Forest Department officials listen to what you want to say”. 52% said “quite often” and 22% said “sometimes”. Respondents from Jetpur (66%) and Kevdi (88%) tended to respond with “quite often”. 45% of the respondents from Makanjhar indicated “rarely” (Table 3.16).

**Table 3.16 Perceptions of whether the Forest Department listened to villagers, expressed by village**

<table>
<thead>
<tr>
<th>FD listens</th>
<th>Village</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Jetpur</td>
</tr>
<tr>
<td>Quite Often</td>
<td>65.7%</td>
</tr>
<tr>
<td>Sometimes</td>
<td>28.6%</td>
</tr>
<tr>
<td>Rarely</td>
<td>5.7%</td>
</tr>
<tr>
<td>Always</td>
<td>0%</td>
</tr>
<tr>
<td>Did not Ans</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

\(^{14}\) *Ujjamani* is a traditional meeting conducted by the traditional leaders in a sacred area of the village (it could be in the village but mostly it occurs in a designated forest area). The head of each family (male member) is invited and the meeting starts with a ceremony. Attendance is mandatory and if an adult is not able to attend, youngsters from the family are sent. Token fines may be imposed on any absentees. Decisions regarding agricultural wage labour and most village level decisions are taken in this meeting.
These responses may be related to the proximity of the Forest Department office to Jetpur and Kevdi. Many residents from both Jetpur and Kevdi villages undertook manual labour for the Forest Department in the forest areas. During this work, it was often the Beat Guard and the Forester who were present at the site and interacting with the villagers. This often develops into a personal rapport between the Forest Department staff and the villagers.

3.7.7.2 Profile of the person from the village community who communicates with the Forest Department

The main spokesperson for the village in all three villages was the Presidents of the JFMC. Few mentioned that both the President and Secretary together were the spokespersons. There was also mention of village elders communicating with the Forest Department officers. Villagers from Jetpur and Kevdi both mentioned the President of the JFMC as the main person who communicated with the Forest Department. The current President of the Jetpur and Kevdi JFMC is a resident of Jetpur and very influential in many of the other institutions in the village, such as the Fisheries Cooperative and the Milk Cooperative. In Makanjhar, people mentioned the President, Secretary and the village elders. The current President and Secretary were new and young incumbents. The village elders of Makanjhar for many years have had a strong presence on the JFMC.

3.7.7.3 Profile of the Forest Department official who communicates with the village community

The Forest Department official who communicates with the community was perceived by respondents as primarily the “Beat Guard”, followed by the “Forester and Beat Guard” and “Forester”. Very few respondents (3%) mentioned the Range Forest Officers (RFO), and when they did mention them was in conjunction with the Foresters.

The importance of Beat Guards for communication with the community is readily apparent. This is not surprising as the Beat Guards represent the lowest level of the strict hierarchy in the Forest Department, and are most likely to be interacting with community as they move around in the forest and villages and supervise the forest.
work. The role of Foresters was also seen as important. The RFO and other senior officers were not seen as regular communicators. Watchmen, who are generally recruited from the same village and under the pay of the Forest Department, did not seem to have much role in communication. These individuals may not be within the communication loop for the Forest Department. There was no mention of the Watchmen by any respondent in the three villages.

3.7.7.4 Suggestions for improving communication with the Forest Department
Respondents were asked if “improved relations with an individual forest officer improve communication”. 74% of the respondents stated that this occurred “quite often”. A few were sceptical (9%), suggesting that improved relations “rarely” improved communication and 13% said that communication improved “sometimes”. Overall, a good one-to-one relation between an individual forest officer and a community member was perceived to contribute to better communication.

3.7.8 Perceptions of community about the Forest Department

3.7.8.1 Transparency
The respondents were divided on whether the Forest Department was transparent or not. 14.3% “strongly agreed” and 27.7% “agreed” that the department was transparent. 21.8% however disagreed and the majority (36.1%) opted for “neutral” (Table 3.17). In practice, the community has to develop a new relationship with different forest officers who are transferred to different positions every few years (approximately 3 to 5 years). In the short term the community was aware who had been posted, and was happy if the individual was honest and sincere. In cases where the officer was neither honest nor sincere, the community resigned itself to the fact that they must accommodate the individual until the person was transferred out.
Table 3.17 Respondents’ opinions about transparency in the Forest Department

<table>
<thead>
<tr>
<th>Village</th>
<th>Makanjhar</th>
<th>Keudi</th>
<th>Jetpur</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>$\text{%}$</td>
<td>10.9</td>
<td>0</td>
<td>3.4</td>
</tr>
<tr>
<td>Agree</td>
<td>$\text{%}$</td>
<td>1.7</td>
<td>0</td>
<td>26.1</td>
</tr>
<tr>
<td>Neutral</td>
<td>$\text{%}$</td>
<td>5.9</td>
<td>30.3</td>
<td>0</td>
</tr>
<tr>
<td>Disagree</td>
<td>$\text{%}$</td>
<td>16.8</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>$\text{%}$</td>
<td>35.3</td>
<td>35.3</td>
<td>29.4</td>
</tr>
</tbody>
</table>

### 3.7.8.2 Similarity to the Police Department

There has been a tendency to liken the Forest Department to the Police Department. While there were many similarities that included wearing police style uniforms, the right to carry arms and the regimented behaviour of staff\(^\text{15}\), there were also many differences specifically when considering JFM. In JFM, the Forest Department was also the facilitator and this required a different approach and skill sets. How did the community perceive this? The majority, i.e. 48.7% of the respondents “strongly agreed” that the Forest Department was similar to the Police Department, followed by 21% who “agreed” (Table 3.18).

Table 3.18 Respondents’ opinions about the similarity of Forest Department and Police Department

<table>
<thead>
<tr>
<th>Village</th>
<th>Makanjhar</th>
<th>Keudi</th>
<th>Jetpur</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>$\text{%}$</td>
<td>15.1</td>
<td>33.6</td>
<td>0</td>
</tr>
<tr>
<td>Agree</td>
<td>$\text{%}$</td>
<td>10.1</td>
<td>0.8</td>
<td>10.1</td>
</tr>
<tr>
<td>Neutral</td>
<td>$\text{%}$</td>
<td>1.7</td>
<td>0.8</td>
<td>0</td>
</tr>
<tr>
<td>Disagree</td>
<td>$\text{%}$</td>
<td>7.6</td>
<td>0</td>
<td>10.9</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>$\text{%}$</td>
<td>0.8</td>
<td>0</td>
<td>8.4</td>
</tr>
<tr>
<td>Total</td>
<td>$\text{%}$</td>
<td>35.3</td>
<td>35.3</td>
<td>29.4</td>
</tr>
</tbody>
</table>

\(^{15}\) For example it is normal for a junior forest officer to salute a senior officer in public
3.7.8.3 The Forest Department listens to the village community

Though a majority agreed that the Forest Department was like the Police Department, they also agreed that the Forest Department listened to the community. 44.5% “strongly agreed” and 37% “agreed” that the Forest Department “listens”. Only 5% disagreed (Table 3.19). This demonstrates the image of the Forest Department, which was seen as a law enforcer and often to be feared but also accessible to the community.

Table 3.19 Respondents’ opinions about the Forest Department listening to community

<table>
<thead>
<tr>
<th>Opin abt FD [c. Listens]</th>
<th>Makanjhar</th>
<th>Kevdi</th>
<th>Jetpur</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>10.9%</td>
<td>32.8%</td>
<td>0.5%</td>
<td>44.5%</td>
</tr>
<tr>
<td>Agree</td>
<td>20.1%</td>
<td>0.8%</td>
<td>26.1%</td>
<td>37.0%</td>
</tr>
<tr>
<td>Neutral</td>
<td>6.7%</td>
<td>0.8%</td>
<td>8.8%</td>
<td>8.4%</td>
</tr>
<tr>
<td>Disagree</td>
<td>4.2%</td>
<td>0%</td>
<td>0.8%</td>
<td>5.0%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>3.4%</td>
<td>0%</td>
<td>0%</td>
<td>3.4%</td>
</tr>
<tr>
<td>Did not Ans</td>
<td>35.3%</td>
<td>35.3%</td>
<td>29.4%</td>
<td>100%</td>
</tr>
</tbody>
</table>

3.7.8.4 The Forest Department personnel are rude

Overall, respondents agreed that the Forest Department personnel are rude (38.7% agreed and 21.8% strongly agreed). However, quite a few also disagreed (26.1% disagreed and 11.8% strongly disagreed) (Table 3.20). There seemed to be a division in opinion with regard to the rudeness of individual personnel. The majority of the responses agreeing that personnel were rude came from Makanjhar and Kevdi, whereas the majority in Jetpur disagreed. This may be explained by Jetpur being a Forest Department village, with village development being a function of the Forest Department. As a result, the Forest Department officials in Jetpur may be more friendly and affable as they were responsible for village development, unlike the other two villages which were revenue villages and the Forest Department was not the agency responsible for their welfare.
Table 3.20 Respondents' opinions about the Forest Department being rude

<table>
<thead>
<tr>
<th>Opin abt FD [d. Rude]</th>
<th>Village</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Makanjhar</td>
<td>Kevdi</td>
<td>Jetpur</td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>¶</td>
<td>19.3%</td>
<td>2.5%</td>
<td>0%</td>
<td>21.8%</td>
<td></td>
</tr>
<tr>
<td>Agree</td>
<td>¶</td>
<td>8.4%</td>
<td>27.7%</td>
<td>2.5%</td>
<td>38.7%</td>
<td></td>
</tr>
<tr>
<td>Disagree</td>
<td>¶</td>
<td>3.4%</td>
<td>3.4%</td>
<td>19.3%</td>
<td>26.1%</td>
<td></td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>¶</td>
<td>4.2%</td>
<td>0%</td>
<td>7.6%</td>
<td>11.8%</td>
<td></td>
</tr>
<tr>
<td>Did not Ans</td>
<td>¶</td>
<td>0%</td>
<td>1.7%</td>
<td>0%</td>
<td>1.7%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>¶</td>
<td>35.3%</td>
<td>35.3%</td>
<td>29.4%</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

3.7.8.5 Is it best to avoid the Forest Department?

Respondents were asked if it was best to keep away from the Forest Department. Here again there was a divide in the opinion of the respondents. While 53% agreed (31.9% agreed and 21% strongly agreed) about 40% disagreed (24.4% disagreed and 15.1% strongly disagreed) (Table 3.21). Overall, villagers from Makanjhar considered it best to avoid the Forest Department, Jetpur and Kevdi were divided. A positive working relationship is important for JFM to function properly, but the results suggest that the Forest Department has a lot of work to do in building trust and relationships.

Table 3.21 Respondents' opinions about avoiding the Forest Department

<table>
<thead>
<tr>
<th>Opin abt FD [e. Keep away]</th>
<th>Village</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Makanjhar</td>
<td>Kevdi</td>
<td>Jetpur</td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>¶</td>
<td>10.9%</td>
<td>10.1%</td>
<td>0%</td>
<td>21.0%</td>
<td></td>
</tr>
<tr>
<td>Agree</td>
<td>¶</td>
<td>15.1%</td>
<td>5.8%</td>
<td>12.8%</td>
<td>31.9%</td>
<td></td>
</tr>
<tr>
<td>Neutral</td>
<td>¶</td>
<td>3.4%</td>
<td>2.5%</td>
<td>0%</td>
<td>5.9%</td>
<td></td>
</tr>
<tr>
<td>Disagree</td>
<td>¶</td>
<td>4.2%</td>
<td>14.3%</td>
<td>5.9%</td>
<td>24.4%</td>
<td></td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>¶</td>
<td>1.7%</td>
<td>2.5%</td>
<td>10.9%</td>
<td>15.1%</td>
<td></td>
</tr>
<tr>
<td>Did not Ans</td>
<td>¶</td>
<td>0%</td>
<td>0.8%</td>
<td>0.8%</td>
<td>1.7%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>¶</td>
<td>35.3%</td>
<td>35.3%</td>
<td>29.4%</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

3.7.8.6 Ease of communication with the Forest Department

Respondents were asked if they agreed with the statement that it was easy to communicate with the Forest Department. 32.8% of the respondents strongly agreed and 46.2% agreed (Table 3.22). This shows that despite the negative perception on many aspects the Forest Department was approachable to a majority of the
respondents. One reason could be that manual labour with the Forest Department allowed for regular interactions, since 95% of the respondents had worked as manual labourers in forestry activities. During these activities they interacted regularly with the Beat Guard and quite often with the Forester as well. It is the Beat Guards and the Foresters who oversee most forest-related work.

Table 3.22 Respondents' opinions about ease of communicating with the Forest Department

<table>
<thead>
<tr>
<th>Opinion about Easy to Communicate</th>
<th>Makanjhar</th>
<th>Kevdi</th>
<th>Jetpur</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>9.2%</td>
<td>21.0%</td>
<td>2.5%</td>
<td>32.8%</td>
</tr>
<tr>
<td>Agree</td>
<td>19.3%</td>
<td>0.8%</td>
<td>26.1%</td>
<td>46.2%</td>
</tr>
<tr>
<td>Neutral</td>
<td>2.5%</td>
<td>3.4%</td>
<td>0%</td>
<td>5.9%</td>
</tr>
<tr>
<td>Disagree</td>
<td>1.7%</td>
<td>9.2%</td>
<td>0%</td>
<td>10.9%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>2.5%</td>
<td>0.8%</td>
<td>0%</td>
<td>3.4%</td>
</tr>
<tr>
<td>Did not Answer</td>
<td>0%</td>
<td>0%</td>
<td>0.8%</td>
<td>0.8%</td>
</tr>
<tr>
<td>Total</td>
<td>35.3%</td>
<td>35.3%</td>
<td>29.4%</td>
<td>100%</td>
</tr>
</tbody>
</table>

3.7.8.7 The Forest Department informs the community of its various schemes

Most respondents overall agreed (91%) that the Forest Department informed the community about various schemes. 61.3% strongly agreed and 30.3% agreed. Overall only 1.6% disagreed (Table 2.23). If the Forest Department informed the community, then the community must be reasonably well aware about various programmes. This contradicts the answers to a question about respondents’ knowledge of the Forest Departments' welfare schemes and programmes, for which 72% claimed they were unaware. It is possible that the Forest Department may speak about programmes in general terms during meetings. However, the details of these programmes and how individuals can benefit may be unclear to individual villagers. Hence while the Forest Department mentioned development programmes, these probably require being communicated in a form useful to the communities. More research may be needed to find the specific requirements of the communities.
Table 3.23 Respondents’ opinions about the Forest Department informing the community about various schemes

<table>
<thead>
<tr>
<th>Opinion about Forest Department informing</th>
<th>Makanjhar</th>
<th>Kevdi</th>
<th>Jetpur</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>23.5%</td>
<td>34.5%</td>
<td>3.4%</td>
<td>61.3%</td>
</tr>
<tr>
<td>Agree</td>
<td>8.4%</td>
<td>0%</td>
<td>21.8%</td>
<td>30.3%</td>
</tr>
<tr>
<td>Neutral</td>
<td>2.5%</td>
<td>0%</td>
<td>2.5%</td>
<td>5.0%</td>
</tr>
<tr>
<td>Did not Answer</td>
<td>0%</td>
<td>0%</td>
<td>1.7%</td>
<td>1.7%</td>
</tr>
<tr>
<td>Disagree</td>
<td>0.8%</td>
<td>0%</td>
<td>0%</td>
<td>0.8%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>0%</td>
<td>0.8%</td>
<td>0%</td>
<td>0.8%</td>
</tr>
<tr>
<td>Total</td>
<td>35.3%</td>
<td>35.3%</td>
<td>29.4%</td>
<td>100%</td>
</tr>
</tbody>
</table>

3.8 Communication and technology

3.8.1 Current methods employed by community members to communicate with the Forest Department

Individuals in the community communicate with the Forest Department in a number of ways. The most popular way was “face to face” with 35% mentioning it as something they “always” do and 40% mentioning they use this mode “quite often”. This was followed by letting the “leader speak for you” with 50% of the respondents choosing “quite often”. “Going with a group” (44% quite often) and “attending meetings” (38% quite often) were other top choices.

By allotting weights to the responses (Always=4, Quite Often=3, Sometimes=2, Rarely=1, Never=0) the order of use from the most to the least popular was “face to face”, “go with group”, “leader speaks for you”, “attend meeting”, use “telephone/cellular”, “write a letter”, “go on a rally” and “email”. Writing a letter, using cellular phones or email were not popular choices, with 46%, 46% and 62%, respectively, mentioning that they never used such methods. However, 7% “always” resorted to writing letter and 11% “always” to using cellular phones. 11% of the respondents also mentioned that they used emails “quite often”. This suggests that such technology was not completely alien to the village community. In Makanjhar during one of the visits I was asked for my email ID and was shown a computer. In Kevdi there are many individuals whose children are studying outside the village in
Mission Schools run by Christian organisations. Many children and college students were familiar with these new technologies\textsuperscript{16}.

3.8.2 Perception of community members on the effectiveness of current methods of communicating with the Forest Department

Communicating “face to face” was seen as the most effective means of communication, with 29% mentioning it as “always” effective followed by 44% saying “quite often”. By allotting weights to the responses (Always=4, Quite Often=3, Sometimes=2, Rarely=1, Never=0) the effective ways of communicating as perceived by respondents in decreasing order were “face to face”, “go with a group”, “leader speaks for you”, “attend meeting”, “write a letter”, use “telephone/cellular”, “email” and “go on rally”. While the general use of a particular method by community overall matched what they perceived, there were two situations that were noteworthy (Table 3.24).

\textbf{Table 3.24: Communication mechanisms by community: use and effectiveness}

<table>
<thead>
<tr>
<th>Communication mechanism used by community</th>
<th>Use (0=not used)</th>
<th>Effectiveness (0=not effective)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face to face</td>
<td>351</td>
<td>346</td>
</tr>
<tr>
<td>Go with group</td>
<td>274</td>
<td>290</td>
</tr>
<tr>
<td>Leader speaks for you</td>
<td>263</td>
<td>270</td>
</tr>
<tr>
<td>Attend meetings</td>
<td>248</td>
<td>268</td>
</tr>
<tr>
<td>Telephone / cellular</td>
<td>92</td>
<td>91</td>
</tr>
<tr>
<td>Write a letter</td>
<td>68</td>
<td>95</td>
</tr>
<tr>
<td>Go on a rally</td>
<td>52</td>
<td>31</td>
</tr>
<tr>
<td>Email</td>
<td>47</td>
<td>50</td>
</tr>
</tbody>
</table>

Writing a letter was perceived as being marginally more effective than the use of a telephone/cellular, telephones were used much more commonly than writing. Similarly, while email was seen as being marginally more effective than going on a rally, rallies were used more than email. Overall, the community members favoured the use of verbal communication when dealing with the Forest Department.

\textsuperscript{16} Personal observation while visiting households in the villages during 2011.
3.8.3 Traditional methods of communicating in the community on different occasions

A few common activities in the community were examined to understand the preference between verbal and written methods in traditional situations. These were: obtaining a loan from money lender, marriage, auction or sale of agriculture produce, leasing out agricultural land, and conducting traditional ceremonies.

3.8.3.1 Moneylender

Obtaining a loan from money lender was a predominantly verbal affair, with 40% of the respondents choosing this option. However, 34% mentioned “verbal and written” and 20% mentioned “written” suggesting that written agreements are also quite common. Moneylenders generally have a register in which they keep the records of transaction and ask the person taking the loan to sign it. If the person was not literate, it is common practice to have thumb imprints affixed on the page of the register. In such cases, all aspects of writing are at the initiative of the moneylender rather than the individual. Power relations dictate what is written and who is compelled to sign. In almost all cases the process would be to safeguard the moneylender rather than the individual.

3.8.3.2 Marriages

Marriages were more equal in the sense that the agreements were often between families of similar status. A majority (57%) of the respondents mentioned “written” as the most preferred communication method followed by 29% “verbal” and 9% “both”. The high level of written communication reflected the tradition of exchange of goods and money by the bridegroom to the bride, the “bride price”. In the event that the marriage broke up, these exchanges were either returned or compensated. Keeping a written record was, therefore, very important.

3.8.3.3 Auction and sale of agricultural produce

Auction and sale of agriculture produce in the village to buyers was mostly recorded in writing. 50% of the respondents mentioned “written” and 33% mention “both” written and verbal. Very few practiced only verbal agreements (6%). Buyers were often from the neighbouring towns of Mandvi and Bardoli. During my field work in
2011, I observed that, traders from as far as Surat also came to purchase agricultural goods directly from the farmers. In all these cases a document or register was kept by the trader and a card was left with the farmer. Both these were updated when any transaction happened - either of produce or of money. As vegetables were harvested over a period of time with many interim payments, these documents become the basis for all transactions.

3.8.3.4 Leasing agricultural land
Leasing land was a common practice and 50% of the respondents mentioned that this agreement was executed both verbally and in written form, followed by 32% using only “written”. Agricultural land was generally leased to farmers from the same village. Sometimes even landless households leased land from farmers with land. Difficulties in managing excess land or temporary circumstances sometimes forced a household to lease land to others. The payment usually took the form of either cash or a share in the harvest. Only 2% said that such transactions were purely verbal.

3.8.3.5 Traditional ceremonies
Traditional ceremonies were frequent occurrences in the study villages and almost all households who had not converted to Christianity attended the ceremonies. The ceremonies may be periodic based on seasons or may be based on events such as deaths or weddings. The events were generally announced across the village by a hired person who used drums or other instruments to make village announcements. In most ceremonies it was expected that at least a small contribution, based on the capacity of the household, in cash or kind, is given. When the contributions were in cash, the organisers maintained records of contributors and the amount contributed\textsuperscript{17}. 37% of the respondents mentioned use of both verbal and written records followed by 30% percent who said records could be purely verbal. Only 1% mentioned that records could be purely written.

\textsuperscript{17} I have been invited to these ceremonies and have paid small amount of money as my contribution. These are recorded in a register.
These examples of traditional activities show that both verbal and written forms of communication were commonly used for agreements and transactions. This was in contradiction to general assumptions that tribal communities only used verbal communications.

3.8.4 Awareness of Forest Department welfare schemes and programmes

3.8.4.1 General awareness
The respondents were asked if they knew about “schemes and programmes of the Forest Department available to ‘them’?” 72% of the respondents answered “no” and 27% said “yes”. Respondents who answered “no” belonged to the villages of Makanjhar and Kevdi. All respondents from Kevdi answered “no”. In contrast, 74% respondents from Jetpur answered “yes”. Interaction with the Forest Department was expected to be high in Jetpur as it is a forest village and adjoining the Forester’s office. But the village of Kevdi, which is part of the same JFMC as Jetpur, does not benefit from the close relationship of the JFMC with the Forest Department.

3.8.4.2 Source of information
Only 27% of the sample responded to this question. Of the 27%, the majority (71%) mentioned that they learnt about the schemes and programmes from the Forester. In effect 19% of the total sample learnt from the Forester and approximately 5% mentioned that they learnt from the Forest Department office. Most respondents from Jetpur got their information from the Forester (93% of the respondents) while respondents from Makanjhar got their information from the Forest Department office (75% of the respondents). Nobody from Makanjhar mentioned receiving information from the Forester. Makanjhar is much further from the nearest forest office.

This also suggests that even though members from Kevdi village interact with the Forest Department, key information about welfare schemes is not necessarily available to them. Jetpur on the other hand seems to have a much stronger interaction with the Forester. Development works in Jetpur are under the jurisdiction of the Forest Department as it is a forest village and this could be the reason for regular interactions.
3.8.5 Ease of getting information about forestry schemes and programmes

When asked how easy it was to get information, 41.7% mentioned that it was “extremely difficult”, 22.2% said “difficult” and 24.1% did not answer. Only 5.6% and 4.6% mentioned it as “very easy” and “easy” respectively (Table 3.25).

Table 3.25: Perception of the ease of getting information about forestry schemes and programmes

<table>
<thead>
<tr>
<th>Ease of getting info</th>
<th>Makanjhar</th>
<th>Kevdi</th>
<th>Jetpur</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Easy</td>
<td>5.6%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Easy</td>
<td>2.8%</td>
<td>0%</td>
<td>1.9%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Neutral</td>
<td>0.9%</td>
<td>0.9%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Difficult</td>
<td>0.9%</td>
<td>1.9%</td>
<td>19.4%</td>
<td>19.4%</td>
</tr>
<tr>
<td>Extremely Difficult</td>
<td>0%</td>
<td>35.2%</td>
<td>6.5%</td>
<td>6.5%</td>
</tr>
<tr>
<td>Did not Ans</td>
<td>28.4%</td>
<td>0.9%</td>
<td>2.8%</td>
<td>2.8%</td>
</tr>
<tr>
<td>Total</td>
<td>38.6%</td>
<td>38.9%</td>
<td>38.6%</td>
<td>100%</td>
</tr>
</tbody>
</table>

A majority of respondents who did not answer (20.4%) came from Makanjhar. They constituted 67% of the respondents from Makanjhar. All the respondents who answered “very easy” also came from Makanjhar. One potential reason for this could be that some of the families in the village have relatives working in the Forest Department. 90% of the respondents from Kevdi village found it extremely difficult to get information, despite the Round Office located very close to their village. Quite a few respondents from Jetpur village also found it difficult (64%) or extremely difficult (21%) to get information on welfare schemes and programmes. This difficulty is despite a perceived better interaction between the Forester and Jetpur residents. This could also suggest that while some information is made available to the residents by the Forester, information that the respondents may want or have asked, may not be very forthcoming.

In the concluding section I summarise the results of the Chapter in terms of communication challenges, communication mechanisms and perceived effectiveness of communication mechanisms used.
3.9 Summary of results

3.9.1 Communication challenges: Communication and power

Result from the three villages indicate that community member’s access to forest resources was sporadic and depended on the level of monitoring by the Forest Department. Kevdi with high forest managed to get resources from the forest whereas the adjoining village Jetpur seem to be restrained in their use of the forest. This is despite Jetpur administered by the Forest Department and being a forest village was expected to have a closer relation with the Forest Department. Respondents mentioned that the Forest Department has used threats and violence against community members and this aspect of the relationship between community and the Forest Department was both latent and manifest.

Communities depend on the Forest Department for information regarding programmes and policy which is conveyed mostly through village meetings. However, the information available to them seems to be inadequate judging by their response. During the initial implementation stages of JFM, both the village community and the lower cadres of the Forest Department had inadequate information about expected changes and were not given attitudinal sensitization or skill training to assist in bringing about expected changes. Benefits were highlighted, but challenges were rarely anticipated or discussed. As per perceived traditions of the community, oral agreements with the Forest Department were accepted in the early phase of JFM, which in many cases took years to be translated into formal written agreements. Although a large percentage of the community was aware that JFM was going to be implemented in their village, there was widespread ambiguity about the year it started specifically in the older village of Makanjhar.

While the local Forest Department was aware of traditional community practices and used them to their benefit, for example using traditional village meetings for information dissemination, these practices were never recognised or given importance. This created conflicts between traditional leaders and JFM leaders. There were no adequate and prior discussions on inter-community relationships
between neighbouring villages and institutions (traditional institutions, political representatives etc.), leading to conflict and stress between neighbouring villages.

JFMCs have been given few administrative, financial and executive powers by the Forest Department. JFMCs took decisions regarding meetings, protection of forests, collecting membership fees, mechanism for distribution of grass and firewood harvesting and distribution. However, important decisions, such as funding for forest-related improvement works, fines for illegal cutting, and decisions on cutting of grass, firewood and small timber were still taken by the Forest Department officers. The legal and financial decision-making functions are all controlled by the Forest Department. While most committees sought to get legitimacy by registering with the Registrar of Cooperatives, adequate legitimacy is still lacking as the Secretary of the JFMC could be from the Forest Department. Due to this lack of functional legitimacy, enforcement of rules by the community is restricted to activities in the traditional sphere and all other management activities requiring financial or administrative assistance is done with the Forest Department’s agreement. Lack of power to take decisions, and ambiguity about the decision-making process has created dissatisfaction and conflict. There is a need for further refinement and appropriate legitimization of rules and procedures. Communication between the community and the Forest Department, and between community leaders and the community is mostly oral and haphazard.

The dominant relation between community members and the Forest Department continues to be for labour work. While there were mixed reactions in response to questions regarding the transparency of the Forest Department, indicating the presence of some amount of corruption, community members emphasized that the behaviour of the personnel bordered on rudeness and that they were often like the Police Department. However, the efforts by the Forest Department to interact with the community seem to have paid off as community members predominantly agreed that the Forest Department officers do listen to them. However more needs to be done to improve relationships, a key factor indicated by community members for improved communication, especially since half the population felt that it was best to
keep away from the Forest Department. Arguably, communities perceive the Forest Department as the partner in management, but the Forest Department needs to change its attitude and requires functional changes to justify this perception.

3.9.2 Communication mechanisms and their effectiveness
Communication and Technology: Perception and Use

Oral vs. written

Oral or verbal communication was the predominant mode of communication. The primary mode of interaction between respondents and the Forest Department indicates an overwhelming (93%) use of verbal methods. Requests for timber were mostly made orally with very few written request to the Forest Department officers. The community preferred and perceived oral communication as being the most effective.

Despite the community members’ preference to use oral methods of communication, there was also evidence that in areas that required record keeping, written methods were used. Nevertheless, oral communication methods that can be described as “face to face”, “go with a group”, “leader speak for you” and “attend meetings” were seen as the most effective mechanisms for getting things done. These are also the methods that are most used by the community.

Traditional vs. technological

Most traditional communication methods continue to be oral. Popular tribal communication avenues were the traditional village meetings (ujjamani) and religious groups, such as bhajan mandali. However, informal discussions between members of the family and friends were also seen as important. Local markets and fairs were other sources of information. In terms of importance, traditional village meetings were second in importance to village meetings, which were seen as the primary source of information. This shows the continued importance of traditional meetings, despite them losing prominence over the past few years due to lower
attendance\textsuperscript{18}. With many community members converting to Christianity these traditional meetings no longer have the full attendance as the Church discourages its congregation from attending them.

Some traditional practices, such as borrowing money from money lenders, marriages, auctions and sale of agricultural produce, leasing agricultural land and other traditional ceremonies, had a good mix of oral and written communication. Community members preferred written agreements when it came to marriages and auction/sale of agricultural produce. In other situations oral methods of communication predominated. Prevalence of illiteracy, general lack of writing skills and predominant use of verbal mode by the community gave rise to the belief that communities avoided written communication. This perception exists with the Forest Department with very little written correspondence between them and the JFMCs\textsuperscript{19}. The survey indicated that in contradiction to the general belief by the Forest Department that forest communities avoid formal/written communication, the communities practice and accept such approaches whenever necessary in their normal day to day interactions.

Use of technological means such as radio and television are restricted due to lack of access. As expected radios are more used than televisions. Other communication means, for example, newsletter, newspaper, VCRs, movies, books, internet and email, though used, are limited to a few individuals. However, a growing number within the community also use cell-phones and emails. These are generally the younger, school and college going youth from the community.

In the next chapter, I present survey results of senior Forest Department officers from across India on perceptions of communication in Joint Forest Management. I describe the structure of Forest Department at National level and the State of Gujarat.

\textsuperscript{18} Discussion with elders in the research villages.

\textsuperscript{19} Interaction with the Forest Department officers and staff at different levels in Gujarat.
CHAPTER 4: FOREST DEPARTMENT

4.1 Introduction

This chapter examines the perceptions of senior Indian Forest Service officers on communication in forest management. I had discussion with the Forest Department at the state level in Gujarat and later at the national level with the Ministry of Environment and Forests (MoEF) in New Delhi during the early stages of my research program. These discussions revealed a need and interest by the department for national and state level communication strategies. The existing communication strategies in some states were seen as inadequate and required change. Many of these strategies were restricted to guidelines on the technical aspects of communication, such as the use of wireless technologies. Communication with the public and the need for effective ways to proceed with communication were seen as challenges and required an updated strategy.

The survey I conducted on communication with senior Indian Forest officers served many purposes. The officers had been in service for more than two decades and had been posted in various regions in various capacities. Hence their perceptions were based on long-term experiences, both as field officers and as policy makers. As current policy influencers, they play a major role at the state and national level when called upon to be part of ministerial committees. The survey explored their views on current challenges, issues of power, possible barriers to information and communication flow, role of technology, identifying communicators and their own perceptions of the Forest Department’s ability to listen and communicate.

True to the nature of their experience, the results from the respondents were varied and covered a range of topics. While there appeared to be diversity on viewpoints, there was consensus on a number of issues and suggestions. The survey captured the perceptions of these senior officers and also acted as a catalyst for increased interest on communication amongst the respondents. Many of them, including those from the Ministry of Environment and Forests, have shown interest in the survey’s
outcomes. By being able to survey a cross-section of officers from across India, the outcomes of this survey should be of use to senior forest officers to initiate discussions on future planning with their administrative departments, both at the state and national level.

The following sections describe the results of the survey. Background information and contexts have been added from my review of relevant literature.

4.2 Demographic data

Forest management in the Indian sub-continent has been evolving since ancient times. The current Indian forest management practices are relatively new and started during the period when most of India was under British governance in the late nineteenth century. The Imperial Forest Service in India was established in 1864 followed by the first Forest Act of 1865. The Imperial Forest Officers were first recruited in 1867 and initially trained in Germany and France, and from 1885 onwards in England.

The name of the Imperial Forest Service was changed by the Government of India to the Indian Forest Service (IFS) in 1966. Officers in the Service, while remaining centralized, were assigned into state cadres, with each state having a well-defined structure (See Figure 4.1, 4.2, Appendix 1 and Appendix 2) working in parallel with other Central Services, namely the Indian Administrative Services (IAS) and the Indian Police Services (IPS). While day-to-day activities do not require collaboration between these services, increasingly, landscape-scale approaches and watershed approaches have required closer collaboration with the IAS officers. At the local level, conflicts and specific cases have required interaction with the Police Department. The role of the Forest Department has quite often been seen as an amalgamation of these two departments as the Forest Department had complete jurisdiction over the development of forest land and is also empowered to apprehend and imprison offenders and suspects.

The Indian Forest Service officers are recruited at the national level through a competitive All India Entrance Examination. After recruitment, they undergo a four
month training period at Lal Bahadur Shastri National Academy of Administration, Mussoorie, Uttarakhand and then a two year training period at the Indira Gandhi National Forest Academy at Dehradun, Uttarakhand where they graduate with a Masters degree. Once they complete the training, the officers are assigned to a state. There are 24 cadres, of which 21 are state cadres and three are joint cadres (for the states of Assam-Meghalaya, Manipur-Tripura and Arunachal Pradesh-Goa-Mizoram Union Territories called the AGMUT Cadre). The officers may also be posted centrally with the Ministry of Environment and Forests, where they may work with a number of other Departments and agencies in the country and abroad. The current authorized strength of the Indian Forest Service is 3079 officers (MoEF 2012).

At the state level, the officers join as probationers for a short duration with the rank of Assistant Conservator of Forests when they are initially posted in the field. As vacancies and promotions arise they are promoted to Deputy Forest Officer (sometimes called Divisional Forest Officer or Deputy Conservator of Forests) in charge of a division or district. Further promotions are to Conservator of Forests, Chief Conservator of Forests, Additional Principal Chief Conservator of Forests, and Principal Chief Conservator of Forests. The Director General at MoEF is selected from the most senior PCCFs from amongst all states in the country. Below the Director General, there are many Additional Director Generals and Inspector Generals of Forests. (Figures 4.1 and 4.2)
Figure 4.1 Organisational hierarchy of Ministry of Environment, Forests and Climate Change, India

<table>
<thead>
<tr>
<th>Organizational Hierarchy of Ministry of Environment, Forests and Climate Change, India*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minister, Environment, Forests and Climate Change</td>
</tr>
<tr>
<td>Secretary, Environment, Forests and Climate Change</td>
</tr>
<tr>
<td>Director General of Forests and Special Secretary</td>
</tr>
<tr>
<td>Additional Director General of Forests</td>
</tr>
<tr>
<td>Inspector General of Forests</td>
</tr>
<tr>
<td>Deputy Inspector General of Forests</td>
</tr>
<tr>
<td>Assistant Inspector Generals of Forests</td>
</tr>
</tbody>
</table>

* This list depicts key positions and is not exhaustive

Figure 4.2 Organisational hierarchy of Forests and Environment Department, Gujarat

<table>
<thead>
<tr>
<th>Organizational Hierarchy Forest and Environment Department, Gujarat State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minister, Forest &amp; Environment Department</td>
</tr>
<tr>
<td>Minister of State, Forest &amp; Environment Department</td>
</tr>
<tr>
<td>Principal Secretary, Forest &amp; Environment Department</td>
</tr>
<tr>
<td>Principal Chief Conservator of Forests (PCCF)</td>
</tr>
<tr>
<td>Additional Principal Chief Conservator of Forests (APCCF)</td>
</tr>
<tr>
<td>Chief Conservator of Forests (CCF)</td>
</tr>
<tr>
<td>Conservator of Forests (CF)</td>
</tr>
<tr>
<td>Deputy Conservator of Forests/Divisional Forest Officer (DyCF/DFO)</td>
</tr>
<tr>
<td>Assistant Conservator of Forests (ACF)</td>
</tr>
<tr>
<td>Range Forest Officer (RFO)</td>
</tr>
<tr>
<td>Round Forester</td>
</tr>
<tr>
<td>Beat Guard</td>
</tr>
</tbody>
</table>
At the state, the Deputy Forest Officer is assisted by the Assistant Conservator of Forests, followed by Range Forest Officer, Forester (or also called the Round Forester) and the Beat Guard. These officers are recruited by the state government. In many villages there are also Watchmen appointed by the Forest Department, though they do not form part of the Forest Department cadre.

In recent years the role of the Forest Department has and addition from one of managing the forest for conservation and production, to managing forests with the village communities for local livelihood objectives. This role includes designing appropriate activities for the development of communities in and near forests and implementing programmes looking at the improvement of livelihoods of people and biodiversity conservation. Due to the extensive reach of the Forest Department in most interior rural areas, the Department is also strategically placed to take up the role of community development. The relationship between the Forest Department and the communities was established long before this phase, for example, through the hiring of labour and the recruitment of logging contractors. In return for usufruct rights\textsuperscript{20}, local communities have also been required to volunteer for reducing forest damage caused by fire or wildlife, and to contribute information on illicit cutting or poaching.

4.3 Sample size information

A total of 502 surveys were distributed, of which 60 were paper-based surveys and 442 web-based surveys. 52 surveys were completed (26 each for the paper-based and web-based versions).

The Indian Forest Service officers were sent for training at UBC by the Indian Government and the Ministry of Environment and Forests. The training was undertaken in collaboration with the Indira Gandhi National Forest Academy,

\textsuperscript{20} These are partial rights given to individuals or groups allowing them the use of forests for non-timber resource extraction.
Dehradun (India), the Maxwell School of Citizenship and Public Affairs, Syracuse University (US), and the Indian Institute of Management, Bangalore (India).

Of the total responses, 7.7% (4) were from women and 92.3% (48) from men. This matches the gender composition of those sent for training. The predominant group comprised Chief Conservators of Forests (44.2%) followed by Additional Principal Chief Conservators of Forests (23.1%) (Table 4.1). The 52 officers represented a total of 19 state cadres out of the 24 possible. In the following sections, the officers have been denoted as R1 to R52.

Table 4.1: Composition of senior IFS officers surveyed

<table>
<thead>
<tr>
<th>Designation</th>
<th>Count</th>
<th>Percent</th>
<th>Cumulative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addl. PCCF</td>
<td>12</td>
<td>23.1%</td>
<td>23.1%</td>
</tr>
<tr>
<td>CCF</td>
<td>23</td>
<td>44.2%</td>
<td>67.3%</td>
</tr>
<tr>
<td>CF</td>
<td>3</td>
<td>5.8%</td>
<td>73.1%</td>
</tr>
<tr>
<td>IG Forests</td>
<td>1</td>
<td>1.9%</td>
<td>75.0%</td>
</tr>
<tr>
<td>Other</td>
<td>13</td>
<td>25.0%</td>
<td>100%</td>
</tr>
<tr>
<td>Total</td>
<td>52</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

4.4 General views on communication

While many studies and reports mention the importance of communication in forest management, there are very few studies looking at the importance that forest managers attribute to communication. The following section examines the importance of communication and the reasons for its importance or lack thereof amongst senior Indian Forest Officers.

4.4.1 Role of communication in effective forest management

The respondents were asked to rate the statement: Communication has an important role in effective forest management.

The response was overwhelmingly in agreement that communication has an important role in effective forest management with 98% of the respondents agreeing (86.5% strongly agreeing and 11.5% agreeing) and 2% disagreeing (Table 4.2).
Table 4.2: Response to statement “communication has an important role in effective forest management”

<table>
<thead>
<tr>
<th>Designation</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Strongly Disagree</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addl. PCCF</td>
<td>21.2%</td>
<td>1.9%</td>
<td>0%</td>
<td>23.1%</td>
</tr>
<tr>
<td>CCF</td>
<td>36.5%</td>
<td>5.8%</td>
<td>1.9%</td>
<td>44.2%</td>
</tr>
<tr>
<td>CF</td>
<td>5.8%</td>
<td>0%</td>
<td>0%</td>
<td>5.8%</td>
</tr>
<tr>
<td>IG Forests</td>
<td>1.9%</td>
<td>0%</td>
<td>0%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Other</td>
<td>21.2%</td>
<td>3.8%</td>
<td>0%</td>
<td>25.8%</td>
</tr>
<tr>
<td>Total</td>
<td>86.5%</td>
<td>11.5%</td>
<td>1.9%</td>
<td>100%</td>
</tr>
</tbody>
</table>

4.4.2 Is there a need to improve communication with the public?
The respondents were asked to rate the statement “communication with the public needs to be improved”. The respondents were also asked to give reasons for their choice.

Overall 94.2% of the respondents agreed (strongly agree 57.7% and agree 36.5%) that there was a need for improvement over the current situation. Of those surveyed, only 3.8% disagreed (Table 4.3).

Table 4.3: Response to statement “communication with the public needs to be improved”

<table>
<thead>
<tr>
<th>Communication...</th>
<th>Count</th>
<th>Percent</th>
<th>Cumulative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>30</td>
<td>57.7%</td>
<td>57.7%</td>
</tr>
<tr>
<td>Agree</td>
<td>19</td>
<td>36.5%</td>
<td>94.2%</td>
</tr>
<tr>
<td>Disagree</td>
<td>1</td>
<td>1.9%</td>
<td>96.2%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>1</td>
<td>1.9%</td>
<td>98.1%</td>
</tr>
<tr>
<td>Undecided</td>
<td>1</td>
<td>1.9%</td>
<td>100%</td>
</tr>
</tbody>
</table>

The respondents who agreed had a number of reasons why there was a need for improving communications with the public. The three primary reasons were:
1. To make the public aware;

2. To improve participation; and

3. To assess the needs of the public.

Other reasons for the need to improve communication were to seek assistance, resolve conflict, reach consensus, improve trust, improve perceptions, improve linkages, get support, to get feedback, to improve transparency, to make better decisions and to induce a sense of ownership on community. Some of the reasons were diametrically opposed, such as suggesting solutions to people (R26) versus empowering the public (R37) or the need of the Forest Department to get work done (R6, R11 and R21) versus enabling the community to influence decisions (R22).

To understand the subject areas that the forest officers wanted the public to be aware of, a query “What did the forest officers want the public to be aware off?” was incorporated into the survey. The range of areas elicited from the respondents ranged from basic understanding of forests and forest management, to government policies and global issues. Quite often the idea was that “communication is needed to understand the stakeholders and to make understand our point to them” (R34). Nevertheless, there were many respondents who also took a stand similar to R44 that “forests (are) to be accepted as owned by people and not machinery called the government”. Lack of communication according to R5 created “information asymmetry (which) is the biggest barrier to building trust”. Forests are public resources and the public are critical stakeholders (R33), hence there should be a two-way communication (R33). But it was felt that the public are “silent stakeholders” (R22) and do not know about programmes (R35). One of the respondents who disagreed that there was a need to improve communication in public, felt that the “public generally does not appreciate long term goals over short term” (R51). Table 4.4 below captures the key suggestions by respondents categorized into public awareness, participation and need assessment. The categories were arrived at by using keywords to different responses.
Table 4.4: Key reasons mentioned by respondents for the need to improve communication

<table>
<thead>
<tr>
<th>To make public aware of:</th>
<th>To improve participation for:</th>
<th>Assess need of public to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Forest and forest management</td>
<td>• Sustainability</td>
<td>• Identify aims and aspirations</td>
</tr>
<tr>
<td>• Renewability of forest</td>
<td>• Managing the forests</td>
<td>• Address immediate concerns and felt needs</td>
</tr>
<tr>
<td>• Intangible values of forests</td>
<td>• Adhering to the participatory approach of the programme</td>
<td>• Develop long term micro plans</td>
</tr>
<tr>
<td>• The rationale of management practices</td>
<td>• Conservation through public private partnership</td>
<td>• Understand their expectations</td>
</tr>
<tr>
<td>• Local and global perspectives of sustainable forest management</td>
<td>• Better involvement</td>
<td>• Better understand and improve government</td>
</tr>
<tr>
<td>• Importance of conservation</td>
<td>• Transparency and ownership</td>
<td>schemes</td>
</tr>
<tr>
<td>• State objectives</td>
<td>• Setting up common goals and prioritizing them for management</td>
<td></td>
</tr>
<tr>
<td>• What Forest Department is doing</td>
<td>• Arriving at consensus</td>
<td></td>
</tr>
<tr>
<td>• Explaining the limitations of the Forest Department</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Regulatory provisions, Government policies, laws and programmes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Clarity on benefits, usufructs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Global Issues</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.4.3 Who should be the target groups?

The respondents who agreed that there was a need for communication in forest management were required to identify two to three target groups. Overall, the entire list of target groups that were identified can be classified into the following five categories:

- Communities (in rural and urban areas)
- Forest Department
- Other government departments
- Institutions
- Political leaders
Of these five categories, communities that depended on forests were the primary target with few mentions about municipalities in urban areas. Within local communities there was a range of targets, including women, youth, students, local leaders, beneficiaries, landless poor, elders, headmen, health workers, medicinal herb collectors and tribals. Institutions in the community that were mentioned included the *Panchayat* (the political bodies that govern villages), Joint Forest Management Committees, women self-help groups and youth organisations.

Other than communities, the Forest Department was the second most mentioned target, with lower rank officers seen as important targets. Primary interest was at the level of the Beat Guard and the Round Forester level. While there were many mentions of frontline staff and lower level functionaries, there were also references to Range Forest Officers, Assistant Conservators of Forests and even Divisional Forest Officers.

Apart from the Forest Department, other government departments mentioned included the Sub Divisional Office, the judiciary and government policy makers. Other institutions referred to were the media, NGOs and forest-based industries. Political leaders, public representatives and public-spirited leaders were other notable mentions.

**4.4.4 What should be the topics for communication?**

An important topic for communication was seen as being able to “develop relationships”, suggesting that communication should lead to better relations. Other topics mentioned by the respondents broadly ranged from information about forests, extension activities, consultation and forest management. These are elaborated below.

**Developing relationships:** The topics under developing relationships included the forest officers getting to know the community, in contrast to being bureaucratic. Efforts to develop a congenial environment by enquiring and acting upon the health and welfare of the community or by discussing the education of children or farming issues such as the availability of seeds, fertilizers and farm credits were mentioned.
These were seen as topics that the community can easily relate to and helpful to gain trust, a necessary condition (Berkes 2004). There was also a caution that one should understand non-verbal messages and be sensitive to culture and gender. A few ways of achieving better relationship were specifically mentioned, such as increasing the number of female staff at the Beat Guard, the Round Forester and the Range Forest Officers levels. These levels were seen as Community-Forest Department interface levels. It was also suggested that talented communicators be trained, as “communication is not everyone’s cup of tea” (R35). There were other suggestions such as undertaking shramdan (voluntary work) and not to “seclude yourself in (an) ivory tower” (R19).

**Information about forests:** Information about forests, though applicable to a wide range of target-groups, seemed to be predominantly addressed with the community and the field staff in mind. The information about forests can be categorized into the following broad areas:

1. General Information
2. Conservation
3. Ecological processes
4. Economic
5. Causes of degradation
6. Policy formation
7. Ownership

General information about forests covered topics from local level activities such as the importance of Joint Forest Management to global level issues such as climate change. The importance of forests and their contribution to the country were seen as important. Information on the sustainable use of forest produce and using renewable energy sources were also suggested. There were repeated mentions of the conservation of both forests and water and their sustainable use. The ecological aspects of forests and water in terms of processes, ecosystem services, protection and sustainable use and their multiple uses including medicinal uses were suggested. Economic issues that were seen as important included wages, credit and
income-generation, and livelihood issues. Income-generation was also seen as a way to divert people from using the forest. Such diversion is in accord with the need to reduce the degradation of forests caused by the increasing population and the negative impacts of human and natural activities on forests. It was felt that concepts of ownership of forest land need to be clearly understood by all concerned along with the rationale of different policies, many of which require the use of forests for non-forestry use. As R18 mentioned, “the rationale of the policies and conservation policies often look like anti-development” and it is necessary that people in general understand the context of the policies that have been developed.

**Extension activities:** Topics for extension activities included information on seed regeneration methods and about various government schemes that are available. While not exactly topics, there were a number of methods mentioned that could be used, including demonstrations, exposure to successful areas, training and capacity building and suggestions to integrate oral and visual methods for greater effect.

**Consultation:** Assessing the needs of people before planning, anticipating future changes and their impacts on livelihoods, assessing opportunity costs of either joining the programme or not, and looking at the trade-offs were some of the topics suggested for consultation with communities. There was considerable stress placed on discussions with local communities, before implementation of programmes in the field. A question (by the respondents) that was asked was how people can contribute to making their own lives better.

**Management:** The management topics were more targeted at forest department staff but applicable to communities. Collective action and effective communication were seen as important along with planning, funding, timely intervention and conflict resolution.

**4.4.5 Ways to strengthen communication**

Regular meetings and interactions, use of appropriate language and suitable media, creating trust and capacity building were the most frequently suggested ways for strengthening communication. Other notable suggestions included involving NGOs,
incorporating civil society movements, developing a strategy, allocating a budget for
strengthening communication, using modern information technology, having more
women staff and creating mechanisms that foster an environment conducive to
communication.

**Meetings and interactions:** The necessity to have regular village meetings and
discussions (including dialogues) were frequently cited for strengthening
communication. Presence in the field (R49) and regular face-to-face interactions
(R7, R8, R9, and R20) were mentioned. R2 suggested that one should “go sit with
them, share and care”. Other methods mentioned included workshops, seminars,
focus groups, house visits and people-to-people contact. “Communication should be
done continuously in periodicity so as to get desired level of awareness” (R48).
While these comments revealed the extent of the gap between the Forest
Department and community with a strong “us” and “them” feeling, there was also a
stated need for regular interaction to improve understanding between them.

**Language:** “Using vernacular language and local cultural tools to make the
message easily comprehensible to the village community” (R5) captures the gist with
regards to use of language. Communication in local languages was preferred,
providing local examples and avoiding jargon. Using common languages were
suggested when needed, and in situations when the local dialect may not be popular
in written form. “Do your homework properly – communication has to be site specific
after understanding the local dynamics. General communication strategies will not
work.” (R48)

**Medium:** Of the number of media that were suggested, two broad approaches were
evident. One was the use of local people and institutional resources such as local
leaders, teachers, members of panchayat, NGOs, JFMC members, Eco
Development Committee members and religious leaders. The other was the use of
mass media or events, such as newspapers, publicity events, letters, printed
advisories, using print and electronic media, demonstrations, exposure visits, public
campaigns, training and capacity building workshops and sign boards. Use of audio
and visual media such as radio, television and internet were also mentioned. There was also mention of wireless communication.

**Trust:** Building trust was a basic condition mentioned by many to strengthen communications. Building trust requires “making the communities feel (that) you are one of them” (R12). This required getting rid of officious attitudes (R12), spending time attending local functions and festivals (R11), listening more and encouraging people to speak without fear (R40) and addressing their immediate concerns (R1). It was believed that such actions would lead to an enabling atmosphere.

**Capacity building:** While capacity building and training seemed inherent in most suggestions, some of the suggestions specifically pointed to the need for capacity building amongst staff and preferably in the form of regular refresher courses. R33 proposed that forest officers should be more involved in important policy making and should be given more chance and resources for articulation with public and press. R35 suggested to “think out of the box solutions. A typical Forest Department is not capable of making effective communication. Engage capable NGOs, have partnerships with such organisations (that) are good at communication. Better communication, recruitment of women staff (50%) and JFM have to come as a package in the Forest Department”.

**4.4.6 Examples of good communication experiences**

There were numerous examples from different parts of India that were seen as good communication initiatives in co-management situation. Examples cited were:

Arabari in West Bengal, Bishnoi in Rajasthan, the Chipko movement in Uttarakhand and Himachal Pradesh, Botha village in Buldhana, Maharashtra, Jhabua Forest Division of Madhya Pradesh, Great Himalayan National Park in Kullu, Himachal Pradesh, the Maozigendri Movement in Manas in Assam, the Young Mizo Association in Mizoram, water conservation in Rajasthan, Narmada Valley Andolan in Madhya Pradesh and Gujarat, the Girl Child Enrolment campaign in Gujarat, Kugti Wildlife Sanctuary in Himachal Pradesh, Dhubri and Aie Valley Divisions of Assam and the national level pulse polio advertisement. In all these examples, a common
practice was getting in touch with the people directly and having series of meetings and campaigns to get people together to “work for the cause”.

Personal experiences of good communication centred on meetings, many associated with the above examples. Quite often these were meetings led by the respondent with a team of Forest Department officers (so may have been rather less than objective). Other experiences mentioned included conducting participatory rural appraisal (PRA) mapping, “Hill Top workshops” (R13), panchayat meetings, Self Help Group meetings (R19), informal meetings with “no prior intimation and no ‘arrangements’, just walking to a village and chatting with smaller groups” (R47) and meetings during Wildlife Week celebrations.

Other good communication experiences included using different techniques such as village street plays, wall writings, print material, video films, using village communicators, speaking to grassroots political leaders and exposure visits.

4.4.7 Challenges to improve communication
A number of communication challenges were identified by the respondents. I have divided these into three broad categories:

1. Community related
2. Environment (as in prevailing situation) related
3. Forest Department related

Community related challenges: A “lack of trust” of the Forest Department by the community was one of the most frequently mentioned challenges. This was followed by the lack of education and illiteracy at the community level. The mis-trust was ascribed to communities having had a “bad experience earlier” (R42) and being “not involved in planning process” (R12). Poverty, the caste system, inhibitions, “closed mind”, superstitions, and societal values were identified as challenges. Rising aspirations and expectations along with increasing population and conflict between stakeholder villages were other emerging challenges mentioned.
Environment: Mischief and misinformation by “vested interests” was high amongst the issues that supposedly damaged the relationship between the Forest Department and the community. There was a hint that these vested interests were the “so-called NGOs” who acted as pressure groups leading to a “lack of mutual trust”. It was suggested that there was a need to improve the sincerity of the NGOs to conservation and development. Politics and individual egos, lack of political will and/or the close relationships between local politicians and officers (R11) that could lead to mutual profit behaviour (i.e., corruption) were identified as other issues.

Forest Department related: A large number of the challenges that were listed were centred on the Forest Department. Many listed language as an issue. Different local languages (R19) and lack of literature in local languages (R39) were seen as major issues. As R51 stated “the communicator does not understand the perspective of the stakeholder and does not speak their language”. The lack of credibility of the Forest Department and pre-conceived notions of the public were seen as challenges.

R36 suggested that the Forest Department commits to “too many promises which we cannot keep”. Lack of commitment was seen by many as an issue and R25 suggested that “non-sticking (sic) to the commitments” and not being able to have “delivery in time” (R37) by the Forest Department are an indication of this problem.

Departmental structural deficiencies were also seen to contribute to the challenges in having good communication. Most of the staff are more than 40 years old and were seen to be unwilling to learn new skills (R29). This unwillingness to learn new skills was important in the context of a “paradigm shift from command and control to people’s participation” (R8). There were suggestions that there was no congenial atmosphere in the present system, with conflicting roles (R52), and the “enforcement and development responsibilities at time(s) were in conflict with each other” (R28). In addition, the limited tenure of officers was seen as a problem (R10). Staff lacked time as they were pre-occupied with meetings, legal and administrative activities (R2) or busy with their regular forest protection works (R29). Resource shortages (R34) and lack of adequate infrastructure such as vehicles to reach people in remote areas (R13) were amongst the difficulties mentioned.
Many respondents mentioned the lack of understanding of local issues by the Forest Department and the need to understand the magnitude of the problems. Research was not given sufficient importance, specifically to identify needs and to develop and design appropriate messages (R18). Stakeholders were not properly identified (R5) nor was the purpose for identifying stakeholders clear (R41). This lack of clarity could be especially important for finding solutions for “conflict between the short term and long term needs” (R52). Additionally, lack of formal training in communication (R33) and articulation skills (R47) amongst front line staff, compounded the situation. Quite often problems included ego (R4) and “thrusting our ideas of conservation and development on people…we talk more and listen less” (R1). The perception of indigenous knowledge by the Forest Department was seen as an issue (R6). There was also mention of the mental barriers of the Forest Department staff (R21). “The mentality of the *Sarkari* (government) personnel itself is the biggest challenge, nothing else” (R35). The lack of public-spiritedness among the many personnel (R5) and “postings of wrong persons” (R11) compounded the challenges.

### 4.4.8 Has JFM helped improve communication with community?

The respondents were asked to rate the statement, “after the JFM agreement there has been an improvement in communication with the community”. 67.3% of the respondents agreed that JFM has helped improve communication whereas 17.3% disagreed. 15.4% were undecided (Table 4.5).

#### Table 4.5: Response to statement “after the JFM agreement there has been an improvement in communication with the community”

<table>
<thead>
<tr>
<th>Designation</th>
<th>Agree (%)</th>
<th>Disagree (%)</th>
<th>Undecided (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addl. PCCF</td>
<td>15.4</td>
<td>5.8</td>
<td>1.9</td>
</tr>
<tr>
<td>CCF</td>
<td>28.8</td>
<td>5.8</td>
<td>9.6</td>
</tr>
<tr>
<td>CF</td>
<td>3.8</td>
<td>1.9</td>
<td>0</td>
</tr>
<tr>
<td>IG Forests</td>
<td>0</td>
<td>1.9</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>19.2</td>
<td>1.9</td>
<td>3.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>67.3</td>
<td>17.3</td>
<td>15.4</td>
</tr>
</tbody>
</table>
The respondents who agreed that communication improved after JFM gave a number of reasons. Primary reasons included better understanding and awareness, greater empowerment, increased trust, better collaboration, improved relationships, more motivation, increased job creation and attitudinal changes. None of the respondents who disagreed or were undecided, gave any reasons for their answers.

The introduction of the Joint Forest Management programme was seen by a number of respondents as beneficial because of the increase in understanding between the department and the community. For the Forest Department, there has been a “better understanding of responsibilities, goals and objectives of stakeholders” (R38). Communities became more aware of their rights and responsibilities and about long-term resource management (R39). Awareness fostered a sense of empowerment (R12), with many activities planned and implemented with active community participation (R9). There was a “roadmap for the future” (R2). Many decisions were also predominantly taken by the community, for example “what species to plant, what areas to close for plantation” (R35).

While JFM was initially “made compulsory, rather thrusted upon the field officers” (R11) the “adversarial relationship gradually waned” (R5). “People came closer to forest officials…and were regarded as friends, philosophers and guides by the community” (R1). Collaboration took many forms, with the recognition of “shared objectives” (R5) and recognition by the Forest Department that “any development activity has to be executed in a collaborative manner” (R27). There was also an increased “sense of belonging to their forest” (R13) “rather than alienation” (R39) by communities.

While “earlier there were no such attempts to involve community” (R36), implementation of the JFM programme improved relations with “confidence building between local community and managers” (R23) and brought “forest bureaucracy and community closer” (R35). A number of respondents mentioned trust and how “people started trusting the forest staff as facilitators” (R21). The necessity for frequent meetings with communities involved with JFM increased further interaction. “Senior officer’s and dignitary’s visits to such areas increased” (R14), contributing to
“motivation for collective action” (R17). After a few initial years there were also results to show, with tangible benefits to communities as local communities were recruited for forest work, increasing numbers of jobs in local areas (R3) along with many development activities in the villages, generally termed as “entry point activities” (R14), also increased the possibilities for earning income locally.

Changes in attitude at the department level were seen by many respondents as a major shift. “JFM brought about change in the way the department was dealing with communities. It changed the mental attitudes of cutting edge staff from policing the forest to taking the community along” (R8). There has also been an “attitudinal shift from a top-down approach to participatory approach” (R29). While there have been many changes leading to better communication there were also cautions about the department's achievements. R11 mentioned that the situation in many places “has not risen beyond spending the budget as per desire of local politicians, Departments, Ministers and the Divisional Forest Officers”.

### 4.5 Flow of information

#### 4.5.1 Feedback about community issues

The respondents were asked to rate the statement: “As a senior officer, I regularly receive feedback on issues that the communities face”. 71.2% agreed of which 42.3% strongly agreed. However, 21.2% disagreed and 7.7% were undecided (Table 4.6).

**Table 4.6: Response to statement “As a senior officer, I regularly receive feedback on issues that the communities face”**

<table>
<thead>
<tr>
<th>Designation</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Undecided</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addl. PCCF</td>
<td>5.8%</td>
<td>9.6%</td>
<td>5.8%</td>
<td>1.9%</td>
</tr>
<tr>
<td>CCF</td>
<td>19.2%</td>
<td>13.5%</td>
<td>9.6%</td>
<td>1.9%</td>
</tr>
<tr>
<td>CF</td>
<td>3.8%</td>
<td>0%</td>
<td>0%</td>
<td>1.9%</td>
</tr>
<tr>
<td>IG Forests</td>
<td>0%</td>
<td>1.9%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>13.5%</td>
<td>3.8%</td>
<td>5.8%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Total</td>
<td>42.3%</td>
<td>28.8%</td>
<td>21.2%</td>
<td>7.7%</td>
</tr>
</tbody>
</table>
4.5.2 Channels for feedback

The primary channels for feedback for the senior forest officers are the field staff of the Forest Department. Quite often it is in the form of reporting by the field staff (R20), in person when the senior forest officers are in the field (R39), or when the field officers come to the offices of the senior forest officers. This communication can also be through telephone (R18). While most of the communication seemed oral in nature through meetings and discussions, there was also mention of written reports (R45). While most feedback seemed to be sporadic, there was some mention of regular meetings and field visits including “formal review of projects with staff” (R39). There was also mention of email and video-conferencing as tools for feedback (R45).

Direct interaction with communities (R12) in the village was the second major channel for feedback. This happens when the senior officers attend village meetings or in many cases by “calling meetings of the office bearers of JFM committee in clusters” (R13). While many prefer to have “informal meetings with stakeholders” (R39) and “one-to-one talks” with JFM members (R42, R30), others have instituted regular meetings with the representatives of the community to give feedback. There were also mentions of peoples’ representatives (R4, R10), local leaders (R14), the members of the executive body (R7) and local political leaders (R36) as key channels for feedback.

A number of respondents mentioned having direct contact with village communities. These were networks of individuals from communities that the officers have cultivated over a period of time. For example, R1 mentioned “people of the village who come to cities and make it a point to meet me” or “my colleagues who worked with me in the field” (R35). R13 made the effort to “sensitize the JFM committee members to approach the local officers and me whenever there are important issues” and to encourage an “open door policy to receive individuals or representatives” (R46). R16 also mentioned having “informers (amongst local village communities)”.

Apart from Forest Department officers and the community members, respondents mentioned the use of mass media to get information. Newspapers and press reports were mentioned by a number of respondents (R1, R2, R7, R9, R10, R30, R34, R36, R39, and R47). Electronic media was also mentioned (R47). In addition, there were occasions when the officers got anonymous phone calls (R42) and letters/post-cards (R47). NGOs and their personnel working in the area were also sources of information and feedback (R21, R27, R30, R34, R36, and R39). Many times information is also received from the district administration (R21) and other government departments (R34).

R40 suggested that while the extent of feedback depended on the posting (official level), effective and periodic monitoring through forms and questionnaires could be helpful. R40 also suggested that e-samadhan (e-solution), an online public grievance redressal system at the state level, gave a good indication of what problems people faced. While use of technology was mentioned as a tool to get information, R44 felt that communication was “mostly oral” creating a challenge for developing tools that can work effectively across a range of situation.

4.6 Methods to communicate rules and procedures

4.6.1 Need to simplify
The respondents were asked to rate the statement: “There is a need to simplify communications about the rules and procedures”. Overall 84.6% of the respondents agreed, with 32.7% strongly agreeing. Overall 13.5% disagreed (Table 4.7). One of the respondents who disagreed suggested that the “villagers are already well informed” (R9)
4.6.2 Methods to improve communication of rules and procedures

The most frequently recommended method to communicate and improve awareness of rules and procedures was to conduct meetings using local or vernacular language. “Local staff frequently visiting the village and repeating the rules in the JFM meetings” (R21), “appraising the communities while interacting with them on tour” (R12), periodic interactive workshops, seminars, group discussions, awareness programmes and training were the other suggestions. A few respondents were emphatic that the rules and procedures needed to be simplified and translated into local languages. In particular many suggested that the key contents of the rules and procedures be in the dialect that was understood by the community. Some suggested that the key rules and procedures that were relevant and useful to the community be shortlisted. One respondent also suggested the importance of identifying areas (such as sharing of benefits) for which the community should decide on the arrangements (R37). Simplified rules and procedures in the local languages could be printed in the form of brochures, booklets (R5) or handbooks (R36) and could have sections of “dos and do nots” (R14) for easy understanding. The translated rules could also be displayed in prominent places including Panchayat Bhawans (Panchayat Offices) and Forest offices (R39). Some even suggested “pictorial depiction of rules and procedures” (R21) and “using sign language” (R6) for the illiterate. A few suggested the use of traditional methods to popularize rules and procedures “by engaging local talent” (R36) and using “local
folk arts like puppet shows, street drama and songs” (R29). Some suggested formal awareness programmes and training. R12 suggested “a simple monthly publication in vernacular to be circulated to all gram sabhas (village body consisting of all adult members) reflecting the latest rules on issues concerning them”.

Apart from engaging village communities there were also suggestions for involving local NGOs and media. NGOs have to be reliable, sincere and genuine (R8, R13). The suggested media were print, radio and television. Internet was also recommended with web pages and e-portals for “communicating rules and procedures unambiguously and providing training to villagers to access these sites/portals” (R40). There was also a suggestion to use technologies such as mobile (cellular phone) technology (R39), SMS messages (R50) and “phone-in programs” (R40). R11 proposed “linking at least some villagers through internet and through interactive radio program as radio signals are available in all the remote villages”.

There was also a mention of strengthening the extension wing and recruitment of extension officers (R52). Recruiting female staff was suggested as a way to increase gender sensitivity and to involve women in JFM villages (R35). Other suggestions included setting up a single window for information (R45) or setting up public information centres (R5) or a public relations duty officer at relevant offices (R31).

4.7 Technology for improved communication

4.7.1 Mobile (cellular) phones
The respondents were asked to rate the statement: “mobile (cellular phones) are a possible way to communicate with communities”. 61.5% agreed with the statement and 36.5% disagreed (Table 4.8).
Table 4.8: Response to statement “mobile (cellular phones) are a possible way to communicate with communities”

<table>
<thead>
<tr>
<th>Designation</th>
<th>Agree</th>
<th>Disagree</th>
<th>Undecided</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addl. PCCF</td>
<td>13.5%</td>
<td>9.6%</td>
<td>0%</td>
</tr>
<tr>
<td>CCF</td>
<td>26.9%</td>
<td>17.3%</td>
<td>0%</td>
</tr>
<tr>
<td>CF</td>
<td>3.8%</td>
<td>0%</td>
<td>1.9%</td>
</tr>
<tr>
<td>IG Forests</td>
<td>0%</td>
<td>1.9%</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>17.3%</td>
<td>7.7%</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>51.5%</td>
<td>36.5%</td>
<td>1.9%</td>
</tr>
</tbody>
</table>

Those who agreed were of the opinion that mobile or cellular communication is already happening and communities and villagers are already using them (R1, R9, R18, R20, R29, R36, R40, R42, R46). A few respondents mentioned that they were one of the best ways for communication and should be harnessed to their full extent (R1). Others gave examples of the use of cellular phones in the Forest Department as well as in other departments for regular communication. It is being “effectively used during fire season to report and control forest fires” (R40). SMS of the daily market rate has been going on for some time in the agriculture sector (R29). It is seen as the best tool for two-way communication and alerts (R21) and “excellent for more communication” (R23). R42 gave four reasons why cellular communication was important and was a good tool; “1. It has become widely available and cost effective, 2. It can give instant updates and feedbacks, 3. Remoteness and distance factor gets reduced, 4. Sense of privacy can be maintained”. R41 found them “very fast and very effective for one to one communication” and R31 added that it was also a “cheap way of communication with a large group or community which is spread over or is residing in remote locations”. Others (R11, 19, 27, 45) mentioned the various possibilities with such technology, including to quickly address problems, to remain in contact with community, for informal discussions and video conferencing. R11 suggested giving mobile phones to JFM villages so that officers stay in constant touch with the leaders. R11 also highlighted many of the limitations
to using mobile technology, including “accessibility, cost, lack of signals, operating skills”.

A number of respondents who disagreed on the use of cellular communication felt that direct personal communication is better. Cellular phones are helpful in one-on-one communication but what is needed is face-to-face dialogue/discussion (R6, R30, R48). Cellular phones are not used for talking to many persons in the village (R14) and management cannot be explained through messages (R49). This technology may be premature in the Indian scenario (R2) and “it can be of some use at (a) later stage when JFM makes some more headway” (R5). It was also observed that in many remote areas they do not work and that people do not have the money to maintain mobile phones (R37).

4.7.2 Internet (websites)

Respondents were asked to rate the statement: “Internet (websites) is a possible way to communicate with communities”. Of the total respondents, 50% disagreed, 44% agreed and 6% were undecided. There were more respondents who strongly disagreed (19%) than who strongly agreed (8%).

Table 4.9: Response to statement “internet (websites) is a possible way to communicate with communities”

<table>
<thead>
<tr>
<th>Designation</th>
<th>Disagree</th>
<th>Agree</th>
<th>Undecided</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addl. PCCF</td>
<td>7.7%</td>
<td>13.5%</td>
<td>1.9%</td>
</tr>
<tr>
<td>CCF</td>
<td>25.0%</td>
<td>17.3%</td>
<td>1.9%</td>
</tr>
<tr>
<td>CF</td>
<td>3.8%</td>
<td>0%</td>
<td>1.9%</td>
</tr>
<tr>
<td>IG Forests</td>
<td>1.9%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>11.5%</td>
<td>13.5%</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>50.0%</td>
<td>44.2%</td>
<td>5.8%</td>
</tr>
</tbody>
</table>

The majority of the respondents who agreed or disagreed about the use of the internet as a possible tool for communication with village communities did so based on its “availability”. R1 mentioned that while the internet is useful, “it will take some
time to reach this stage as access to Internet is limited at the moment” (R1). Many were optimistic. R39 mentioned that “computers are increasingly available in schools and NGOs and gradually are entering even the remote villages with broadband and mobile-based technology covering larger areas”. Most of the respondents who disagreed about the use of the Internet mentioned the lack of availability in villages and rural areas and R5 observed that “even many forest offices do not have Internet connection”. R42 felt that it could also be counterproductive as “it can be seen to be “elitist””.

Several respondents thought that this technology had possibilities and potential. It could be used for “betterment and updated knowledge” (R9), “audio messages (could be used) in Internet” (R3) and websites could be in the vernacular language (R8). R11 suggested that over a period of time each villager could have a personalized email ID that would help forest officers get in touch with them directly. R46 mentioned that “sporadic examples are available that prove internet as a strong medium but the infrastructure needs to be rugged”. R47 highlighted the efforts made by the Indian Government and mentioned that “with over 600,000 Community Service Centres being set up in India under the e-Governance Plan, apart from increased penetration of mobile phones – there are plenty of opportunities of reaching out to people in remote areas in remote time”.

R48 captured the situation as: “Most local communities may not have Internet facility (Indian context); it will not be very effective in that sense. However, use of Internet is growing, therefore, we need to look into and invest in this strategy as a tool for future communication strategy.”

4.8 Officers involved with public

4.8.1 Who is the main department contact?

The respondents were given seven choices and asked who among the officers listed constituted the main contact for the village community in the field. The seven choices were; Deputy Conservator of Forests, Assistant Conservator of Forests, Range Forest Officer, Round Forester, Beat Guard, Watchman and “any other”. The
option “any other” was not chosen by any of the respondents. The Beat Guard was the most frequent contact with 61.5%, followed by the Forester with 17.3% (Table 4.10). There was no consensus among the respondents on a particular level of officer as the designated department contact.

Table 4.10: Main Forest Department contact for the community

<table>
<thead>
<tr>
<th>FDContact</th>
<th>Designation sorted</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Addl. PCCF</td>
</tr>
<tr>
<td>Watchman</td>
<td>0%</td>
</tr>
<tr>
<td>Beat Guard</td>
<td>19.2%</td>
</tr>
<tr>
<td>Forester</td>
<td>3.8%</td>
</tr>
<tr>
<td>Range Forest Officer</td>
<td>1.9%</td>
</tr>
<tr>
<td>Assistant Conservator of ...</td>
<td>0%</td>
</tr>
<tr>
<td>Deputy Conservator of F...</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>25.0%</td>
</tr>
</tbody>
</table>

The Beat Guard, perceived by most as the main contact, was seen as someone who was often “a local person, speaks in local language and stays with local community” (R36), “in many cases recruited from the local community” and has a better bonding (R47). R46 stated that the “Beat Guard is usually a boy from the village… (and) his message must be corroborated by camp level officers (Foresters) and frequently by Range Officers also”. R35 and R41 also mentioned the need for training at the Beat Guard level, specifically to improve their skills to listen and communicate appropriately. R39 stated that in bigger states it is the Beat Guard or the Forester who is the main contact and in smaller administrations such as the Union Territories of Andaman and Nicobar Islands it was the Range Forest Officers who were the key contacts with the community.

R31 suggested Round Foresters as the main contacts and mentioned that Foresters are not only available on a day-to-day basis but also have information on programs. They were also described as better skilled so that they are able to appreciate the points of the communities and were able to convey information effectively to the management. R38 argued that “generally it is the Beat Guard or Forester but one
would prefer a sensitive Range Forest Officer as he is the most important link between the higher and lower hierarchies of the department and should be able to handle conflicts”.

4.8.2 Does personality affect communication?

Respondents were asked to rate the statement: “The personality of the individual officer affects communication with the community”.

More than 90% of the respondents agreed that the personality of the individual officer affects communication with the community, 52% strongly agreeing. Overall 7.7% disagreed, and 1.9% undecided (Table 4.11).

Table 4.11: Response to the statement “personality of the individual officer affects communication with the community”

<table>
<thead>
<tr>
<th>Designation</th>
<th>Agree</th>
<th>Disagree</th>
<th>Undecided</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addl. PCCF</td>
<td>21.2%</td>
<td>1.9%</td>
<td>0%</td>
</tr>
<tr>
<td>CCF</td>
<td>38.5%</td>
<td>3.8%</td>
<td>1.9%</td>
</tr>
<tr>
<td>CF</td>
<td>5.8%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>IG Forests</td>
<td>1.9%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>23.1%</td>
<td>1.9%</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>90.4%</td>
<td>7.7%</td>
<td>1.9%</td>
</tr>
</tbody>
</table>

Those who disagreed were of the general opinion that there are other factors rather than just personality. For example R36 mentioned the importance of “commitment of an individual for JFM, (the officer’s) communication style and local knowledge”. R24 mentioned the need to have a “free and fair interaction with JFM community to provide real field level technical aspects about forestry as well as JFM (to the) community”. R41 disagreed because he felt it was not lack of personality but lack of training. R12, who was undecided about this topic, mentioned that “inaccessibility (of the individual), arrogance and being rude and impolite with the public” could also be personality traits of an individual, which could be seen as being detrimental to communication.
The respondents identified a number of characteristics and personality traits. I have classified these broadly into attitudes and skills.

**Attitudes:** Some enabling attitudes that were mentioned included being affable (R1), having integrity and being sincere (R6), having an amicable nature (R10), having credibility (R22), a person with cultural and gender sensitivity (R40) and being accommodating in nature (R52). Other positive characteristics mentioned were using “simple language and easy demeanour” (R40), having a dynamic or vibrant personality (R16), officers who are bold, frank and honest (R19) and having positive “body language” (R18 and R27). Others included a “go-getter” attitude (R21), down-to-earth approach (R39) and officers “keen to work with communities and devotes more time and patience” (R48). R33 mentioned that “JFM or for that matter any government programme depends heavily on the zeal and initiative of the officer steering the program. Only the one who takes it as a mission and not as an annual target is likely to succeed”. R34 felt that “the officer himself should be convinced about the JFM, if he is not committed, the communication will not happen”. R3 saw this as a condition and mentioned that “the officer (has to be) of the school of thought that JFM is the best way of managing forests”.

R31 mentioned that “in fact most of the examples of successful institutions of JFM come from individual initiatives”. R37 reiterated the importance of the officer, suggesting that “miscommunication or an officer not having communication with communities will make all previous efforts zero”. The limitations and drawbacks of relying on individuals were highlighted by R8: “in the Forest Department, the Divisional Forest Officer is the key person. A whole division is controlled by the DFO. The way the lower staff behave is strongly influenced by the personality of the DFO. If he (or she) is communicative and is not corrupt, he (or she) will push these qualities down the line….but will be effective only during his (her) tenure as DFO”. R43 suggested that the officers should have a “genuine feeling/concern for the cause of the village and individual people”.

R4 highlighted characteristics that are constraining and suggested that “typical bureaucratic style”, “withdrawn approach” and “compartmentalized working”
adversely affected communication. If a person was shy, they do not communicate (R20). However, R17 mentioned that if the person was extrovert, they mix well and if they were introvert, they may be respected for sincerity.

**Skills:** An individual’s skills were seen important (R14) and a number of respondents specified the different enabling skills. For example, the different types of skills mentioned included speaking skills (R18), negotiation skills (R21, R46), communication skills (R2, R39), skill to improve relationship with people (R43), convincing skills (R48), confidence building skills (R2), planning skills (R9) and listening capacity (R10, R11).

All these different aspects were seen as important facets of the personality of an officer. Mahatma Gandhi was identified as a good example of a person who was able to communicate gracefully but with impact (R27). B.M.S. Rathore, a senior forest officer, known for his works in Harda (Madhya Pradesh state) on JFM, was also suggested as an example.

**4.8.3 Is personality a criterion for a work assignment to a JFM area?**
The respondents were asked to rate the statement: “The department looks at the personality of an individual officer (as a good communicator) when posting to JFM areas”. While personality of the individual was seen as an important criterion for communication, over 73% respondents felt that the personality of an individual is not taken into consideration when posting; 19% thought that it was and 8% were undecided.

**4.9 Meetings with the public**

**4.9.1 Do regular community meetings help in improving relationship?**
The respondents were asked to rate the statement: “It is important to build relationships through regular community meetings”. More than 94% of the respondents agreed, of which 56% agreed strongly.
4.9.2 How often does a senior officer have direct meetings with the public?

The respondents were asked to rate the statement: “As a senior officer, I often get the opportunity to have meetings with JFM village communities”. 63.5% agreed, 25% disagreed and 11.5% were undecided (Table 4.12).

Table 4.12: Response to the statement “I often get the opportunity to have meetings with JFM village communities”

<table>
<thead>
<tr>
<th>Designation</th>
<th>Agree</th>
<th>Disagree</th>
<th>Undecided</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addl. PCCF</td>
<td>13.5%</td>
<td>7.7%</td>
<td>1.9%</td>
</tr>
<tr>
<td>CCF</td>
<td>28.8%</td>
<td>9.6%</td>
<td>5.8%</td>
</tr>
<tr>
<td>CF</td>
<td>1.9%</td>
<td>3.8%</td>
<td>0%</td>
</tr>
<tr>
<td>IG Forests</td>
<td>1.9%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>17.3%</td>
<td>3.8%</td>
<td>3.8%</td>
</tr>
<tr>
<td>Total</td>
<td>63.5%</td>
<td>25.0%</td>
<td>11.5%</td>
</tr>
</tbody>
</table>

However, when asked about details of their last meeting, 40% did not answer and only 40% had had meetings in the past two years. The remaining 20% had meetings spread over many years, with two respondents (from the agree category) indicating that their last meeting with the public were in 1988 and 1999.

4.10 State Forest Department strategy

4.10.1 Perception of senior officers

Respondents were asked if their state had a communication strategy. 63% replied in the negative. Table 4.13 captures the response of the respondents about the communication strategy in their respective state cadre.
Table 4.13: Communication strategy initiatives in different states

<table>
<thead>
<tr>
<th>State Cadre</th>
<th>Number of respondents</th>
<th>Year of strategy, if yes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C. Strategy - Yes</td>
<td>C. Strategy - No</td>
</tr>
<tr>
<td>AGMUT</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Andhra Pradesh</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Assam Meghalaya</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Chhattisgarh</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Gujarat</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Haryana</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Himachal Pradesh</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Jharkhand</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Kerala</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Madhya Pradesh</td>
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<td>2</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Odisha</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Punjab</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Rajasthan</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Tamil Nadu</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Uttar Pradesh</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Uttarakhand</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>West Bengal</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

For ten states, officers from the same state cadre gave conflicting answers. Officers from 3 states were consistent in their answer (Assam, Madhya Pradesh and Gujarat).

The oldest communication strategy mentioned was that of Odisha, dating back to 1989 and the most recent is that of Haryana in 2012. Respondents from seven states indicated that their state does not have a communication strategy.
4.11 Role of NGOs

Respondents were asked to rate the statement: "NGOs have a role in improving communication between the Forest Department and communities". 83% agreed with the statement, of which 19% agreed strongly.

The respondents gave many attributes of the NGOs that they see as enablers or impediments for communication. Other attributes that were important for building a relationship between the Forest Departments and communities were also mentioned. Primary attributes voiced by a number of respondents were the interface role played by NGOs, good interactions of NGOs with communities, flexibility of functioning, skills, trust that a village community bestows on an NGO, proximity to the village community and structural advantages. A number of limitations and negative traits of NGOs were also mentioned.

**Interface role**: R1, R12, R23 and R25 mentioned that “NGOs are an important interface between the department and community”. NGOs were seen to play a bridging role or link between the aspirations of communities and priorities of the Forest Department, especially in cases where the government machinery fell short of reaching the community (R4, R15, R34, R 40, R43, R46). NGOs can act as good facilitators (R7, R52) and mediators (R12, R27). According to R21, NGOs established in the village are good entry points (for initiating a programme by the Forest Department).

**Interaction**: R4 thought that third party interactions are often necessary to bring down barriers. NGOs “have very good contact with the JFM communities” (R20), are “accessible” (R45), “mix up much better with stakeholders” (R22), and have “regular contact and are good in handholding” (R50). They can harness the social capital available in the village and communicate with the people more regularly and effectively, and can address their needs (R1). R31 felt that NGOs can help develop networks among participants for effective communication/functions. According to R35, an NGO was more sensitive towards improved communication, compared to a Forest Department. R8 however cautioned that only selected reputable NGOs were effective communicators.
**Flexibility:** There was “flexibility with NGOs” (R25) and “flexibility in administrative and financial system” (R29). They were not “bound by rules, regulations and service conditions which bind a government servant” (R3). They “do not enforce any law” (R22) and “people repose faith in them as they are free from regulatory duties that government functionaries have to perform” (R40) in the sense of bureaucratic rules and regulations. They can do certain activities that may not be possible or advisable for a government agency (R42). They have “the non-official cover and appearance” (R32) and also “do not have the baggage of government” (R6).

**Skills:** R40 felt that NGOs “possess specific skills, if they are dedicated and trained”. R39 mentioned that “they have backgrounds in social sciences and experience of working with local communities…”. “Some NGOs have sociologists and biologists in their team; this adds better perspective to the communication” (R5). They are also “knowledgeable about the socio-economic position and the needs of the people” (R21). “Some are specifically well-equipped to do the job and are in a better position” (R42). Many have “better soft skills” (R47). This apart, “mostly socially-committed persons are in NGOs as compared to the Forest Department” (R29) and “their motivational level is higher than a government official” (R39).

**Trust:** R5 believed that having NGOs in the team reduced initial mistrust or apprehension, especially when there was general cynicism about government programs in some areas. “Genuine NGOs being effective and known to the community, they become of great help in creating a sense of trust and confidence among the community” (R13). They have the confidence of the people (R21) and people were not afraid of them (R14). NGOs give a sense of being non-biased to most people (R42) and improve the credibility of dialogue (R23). R22, however, cautioned that many NGOs “build trust by glorifying them (community)”.

**Proximity:** R51 believed that NGOs “can devote more time and be localized”; they can also be located in the area (R3) and be “site specific” (R6). They are based in the field (R39) and “frequently visit the area”. They also “speak the local language, have knowledge of local problems and local people” (R36).
**Structure:** R20 highlighted that NGOs “are part of the JFM” programme. Involving NGOs was mentioned in most state government resolutions on JFM. R31 believed that NGOs “can balance the issue of limited number of functionaries in Forest Department”.

Those who disagreed about the role of NGOs in improving communication in JFM listed the limitations of NGOs and issues that arise when interacting with them. R30 felt that NGOs “work for their own hidden agenda, are not very transparent, and their vision is not very broad”. “Most NGOs at local level are infested with political people and some local level journalists having vested interest, and are guided by their own personal agenda” (R2). R17 mentioned that they were also like a (government) department and were often insincere. R33 felt that “most NGOs act as anti-establishment and instead of helping bridge the gap between communities and the Forest Department they foster mistrust for the government establishment”. R49 supported this view and mentioned that “NGOs do not put forth the department point of view but promulgate their own understanding of issues, which is usually anti-management.” Highlighting some of the NGOs run by single individuals, R49 mentioned that “NGOs here are mostly individuals, who have their own livelihood issues”.

4.12 Senior officers’ perceptions of the Forest Department

4.12.1 Transparency

The respondents were asked to rate the statement “the Forest Department is very transparent”, 51.9% agreed, 25% disagreed and 23.1% were undecided (Table 4.14).
Table 4.14: Response to statement “the Forest Department is very transparent”

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<th>Undecided</th>
</tr>
</thead>
<tbody>
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<tr>
<td>CCF</td>
<td>25.0%</td>
<td>7.7%</td>
<td>11.5%</td>
</tr>
<tr>
<td>CF</td>
<td>3.8%</td>
<td>1.9%</td>
<td>0%</td>
</tr>
<tr>
<td>IG Forests</td>
<td>1.9%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>9.6%</td>
<td>9.6%</td>
<td>5.8%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>51.9%</td>
<td>25.0%</td>
<td>23.1%</td>
</tr>
</tbody>
</table>

Several reasons were given why the Forest Department was considered transparent. Many voiced the opinion that the Joint Forest Management programme itself makes the Forest Department transparent while several mentioned the Right to Information (RTI) Act that forces the Department to part with information and thus be transparent. Quite a few also felt that while there was an intention to become transparent, it was still person-specific and often place-specific. A few also touched upon structural aspects of the Forest Department and the mechanisms that contribute to inhibiting or enhancing transparency, including corruption and consultation.

**Joint Forest Management:** R39 mentioned that “we have better presence at the field level and efforts like JFM or Eco-Development Societies are steps indicating transparency”. This view was supported by R7 and R20, who suggested that working with JFM communities since 1989 was in itself a reason to expect transparency. R27 elaborated on this and indicated that with respect to field-oriented activities, “any activity has to be in collaboration with local peoples…conservation of biodiversity needs people’s support so the department has to remain transparent otherwise, it will not be able to conserve biodiversity”. R31 mentioned that “local involvement (is) a necessity in functions like fire protection, afforestation, any exigency in the forest”. R21 felt from his experience that JFMCs “are clear about the environmental status, the rules and procedures of the department and aware of the
schemes being implemented”. R9 stated that the Forest Department “tries every effort to put issues and solutions for open discussion and decisions”. However R8 observed that “no communities are involved in decision-making or preparing Working Plans”

**Right to information (RTI):** R40 stated that “with the enactment of the RTI Act, transparency has increased”. R20 and R30 suggested that anyone could get information through the Right to Information Act. R47 felt that “there is very little that goes on in the field without involving the local people; after the advent of RTI nothing remains confidential anymore”. R36 expressed similar views, “we stand to gain from being transparent; after RTI we can hardly hide anything”. R11 mentioned that “vast information is collected at different levels. The same is provided under RTI”. R48, however, felt that “we are moving towards transparency, RTI mandate/increased involvement with communities. Therefore we may not be very transparent at the moment but we are moving in that direction”.

**Person and place specific:** R29 suggested that transparency in the department “depends upon person to person”. “The department has policies and rules to promote transparency, but the implementation depends on individuals, which gives mixed results” (R49). “Field officers are not given to sharing information with the local communities. They feel that if they become too transparent they would be harassed by the local unscrupulous elements” (R33). Some field officers have a “fear of litigation” (R42). R45 stated that the Forest Department had an “inhibition to share information with community”. R46 suggested that “arrogance of government officials and fear in people’s minds still remain impediments”. R42 felt that there was an “inherent sense of ‘I know best, why should others know’ kind of attitude. R40’s view was that “individual personalities also make a great difference”. R5 highlighted the issue of corrupt officers and mentioned that “corrupt officers don’t make the system transparent”.

**Structures and mechanisms:** R5 disagreed that the Forest Department is transparent “as it was (a) control and command type of administration so far. Transparency is still far away. However, opacity is reduced to a large extent”. R35
elaborated on this, mentioning that “the forest bureaucracy is in need of very basic improvements such as candidates from a social science background are still not allowed to take entrance tests….and we talk of JFM…training in IGNFA, Dehradun is still being imparted by untrained forest officials”. On the other hand, R47 believed that “we have strong presence of print and electronic media, even in remote areas” contributing to transparency. R31 mentioned that “there are no issues of “national security”, “official secrets” etc. dealt with by the Forest Department. There is nothing which can be said to be hidden – policies, programs, laws”. “All information is available on websites and could be accessed” (R12). At the village community level, “there is a social audit wall in each village where funds availability and the proposed activities are listed” (R3), contributing to financial transparency in some states. R6 suggested that “clear guidance and inspection” further contributes to transparency. There were two contrasting views on decision-making. R9 mentioned that Forest Departments “try every effort to put issues and solutions for open discussion and decisions” whereas R8 felt that “no communities are involved in decision-making or preparing Working Plans”.

4.12.2 Policing role
The respondents were asked to rate the statement “the Forest Department is like the Police Department”. 57.7% disagreed, of which 6% strongly disagreed. 32.7% agreed and 9.6% were undecided (Table 4.15).

Table 4.15: Response to statement “the Forest Department is like the Police Department”

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<tr>
<th>Designation</th>
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<th>Agree</th>
<th>Undecided</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addl. PCCF</td>
<td>13.5%</td>
<td>7.7%</td>
<td>1.9%</td>
</tr>
<tr>
<td>CCF</td>
<td>28.8%</td>
<td>11.5%</td>
<td>3.8%</td>
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<tr>
<td>CF</td>
<td>5.8%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>IG Forests</td>
<td>1.9%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>7.7%</td>
<td>13.5%</td>
<td>3.8%</td>
</tr>
<tr>
<td>Total</td>
<td>57.7%</td>
<td>32.7%</td>
<td>9.5%</td>
</tr>
</tbody>
</table>
A number of respondents (from both the “agree” and “disagree” categories) alluded to the structure and functions of the department. Those who disagreed also mentioned ongoing changes in the functions of the department that meant that the Forest Department could no longer be equated with the Police Department. However, many agreed that the Forest Department definitely has a “policing” function, albeit as one of its many functions. Several respondents highlighted the reasons why such perceptions continue and many described the inherent conflicts encountered while pursuing their duties. Detailed views of the respondents are categorized below.

**Structure and functions:** R15 bluntly agreed that the Forest Department was similar to a police department since the “structure of department is like that” and R22 argued that this is the case “because it enforces the law and catches culprits”. R42 agreed, “more or less…it has certain powers that the police enjoy (and) most of the time, the department does policing of its forests and other resources, rather than managing it with people’s participation”. R8 suggested that “the mentality of command and control is still prevalent”. The “Forest Department is a regulatory department” (R24) and forest officers “have most of the powers of police offices in forest and wildlife matters. Protection is the main duty” (R43). R30 however disagreed and mentioned that the “Forest Department has no power like the police. The Forest Department has to work for the protection of natural resources and can do only that work that has a scientific basis and is permitted under the rules”. R51, who was undecided, stated that the Forest Department “has some regulatory and preventive functions where it exercises police powers”. R46 mentioned that “although a certain degree of policing is involved to contain forest crimes and try offences, the role of the Forest Department is more social in (character) providing essential goods and services”. R47 suggested that “the only commonality is law enforcement and uniformed service. But support systems, accountability, challenges etc. are totally different”. While agreeing about the policing role of forest officers, R39 indicated that “we have more developmental roles than policing, which is a small part of our duties”. R4 elaborated, “apart from protection, the department is involved in many development activities in view of livelihood issues”. R7 supported
this view and stated that “the department may be semi-disciplined but is very much involved with community development”. “The forest staff do not punish the villagers like the police by imprisonment for theft from the forest immediately, but compound the case to deter them from committing forest offences chronically” (R21). R1 mentioned that the “nature of the job is unlike the police but more of a manager who tries to protect the area for which he is a custodian and conservator”.

**Policing as a partial role:** Policing was seen as only one of the many roles of the Forest Department (R6) (R49). R31 mentioned that the Forest Department “only defends public resources from illegal activities of individuals /individual-groups. Enforcement of law (is) only a part of functions”. “Saving from smugglers is anyway a police job” (R38). In “most of the Territorial Divisions, protection works are like police works. But other functions (in the) Division are quite participatory” (R29). The “Police Department’s role is mainly enforcement whereas the Forest Department’s role is partly enforcement and partly development (R52)”. The “Forest Department is not only a public service department, it has role of protecting National Parks, Sanctuaries and Ecosystems” (R5). R35 mentioned that “forest management is basically linked to livelihood management of the people living close to forests. For this, the Forest Department has to be friendly with people and not policing the forest all the time”.

**Changing scenario:** R2 stated that the “Forest Department has changed a lot in the last 20 years”. “The role of the Forest Department has changed over the years from policing to partnership” suggested R34. The “policing role has been shed now” (R12). R37 added “all DFOs do not do that (policing) and depend on postings”. The “Forest Department is more production oriented and result oriented (activities)…and enforcement of legal laws in the department has to be collaborative, rather than by force like in the police” (R27). R33 opined that “the wherewithal and the socio-political structure at the grass-roots level no longer allow the kind of attitude the word “policing” stands for”. R36 corroborated this view “we cannot police people any further – even police cannot police people on the wrong grounds….”.
Perception reasons and role conflicts: R8 suggested that “there is a conflict of duties at the cutting edge level”. R38 elaborated, explaining that there were “demands to save the forest from the very set of people who are dependent on it”. R11 suggested that “protection work is of utmost importance to protect public resources” with similar views being echoed by R16, who mentioned the importance of the police’s role “especially in controlling illegal trade in timber”. R40 summed up the situation, “traditionally being a tree-centred department it was more police like, but with focus of forest policy shifting to being people-centric, the Forest Department is trying hard to balance its social and regulatory role – both of which are necessary in the present context”.

4.12.3 Open to listening
The respondents were asked to rate the statement “the Forest Department listens to the community”. About 76.9% of the respondents agreed, 5.8% disagreed and 17.3% were undecided (Table 4.16).

Table 4.16: Response to statement “the Forest Department listens to the community”

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<td>CCF</td>
<td>36.5%</td>
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<tr>
<td>CF</td>
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<td>0%</td>
</tr>
<tr>
<td>IG Forests</td>
<td>1.9%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>15.4%</td>
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<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>76.9%</td>
<td>17.3%</td>
<td>5.8%</td>
</tr>
</tbody>
</table>

Respondents that had postings for less than 5 years in JFM areas disagreed, whereas the more experienced respondents (more than 5 years) were of the opinion that the department listened to the community. Almost all those who agreed that the Forest Department listened to the community gave varying reasons. Two reasons were prominent. First, JFM in itself was a major turning point that made the department to listen. The second was the requirement to prepare village micro-
Despite these trends, quite a few respondents believed that instances of the Forest Department listening to community were sporadic. The following elaborates on these major views of the respondents.

**Department has to listen to the community:** R33 stated that “no officer can survive the present socio-economic structure if he refuses to listen to the local people”. R51 mentioned that “without listening to the community it would be difficult to protect and develop the forest, (which) is the mandate of the Forest Department”. This was echoed by R27 and R24 who said that “local community support is a must for the Forest Department, therefore the department has to listen (to) the community” and “we have to take the help of community a number of times”, especially because “for their functions, forest personnel largely depend upon cooperation of local people” (R31). R1 mentioned that the “department tries to address the needs of the people and that is why the department has taken many people-centric measures over the years”. R2 suggested that “there has been gradual change in the last 20 years”. R5 however cautioned that “now, due to various pressures, the Forest Department listens to the community, although not where vested interests are involved”. R36 advises that “we stand to gain by listening to them (community), a patient hear can solve many problems”.

**Influence of Joint Forest Management:** R7 stated that the requirement to listen “is inbuilt in the process of JFM” and its implementation (R20). R21 suggested that “JFM is the initiative which is highly successful”. R39 suggested that “setting up JFM (committees) are an indication of the effort only. We also have State Wildlife Advisory Boards with strong representation from the local community and people’s representatives where various issues are discussed and then decisions are taken”. R13, who was undecided, suggested that “there is need to become more receptive to the ideas and suggestions of the community to ensure effective implementation of JFM programme”.

**Influence of micro-planning:** R12 mentioned that “micro-plans are now being made after consultation with communities”. “Communities have a say in micro-planning” (R3) and “opinion is collected for micro-planning” (R17). “The management
plans take into account the requirement of communities. Strategies are based on the needs of the communities” (R31). For example, “the choice of species for afforestation is done with active participation of locals and their preferences are given priority” (R16). R52 was concerned that although “the views of the villagers regarding resource management are increasingly being accommodated in the microp… there is a need to synchronize micro-plans with macro-plans i.e. Working Plans (of the department)”.

**Sporadic attempts**: All categories of respondents (those who agreed, disagreed and were undecided) were of the opinion that “listening” by the Forest Department was sporadic. “Sometimes...we do listen, we need to” (R22). R10 mentioned that listening happens but questioned the extent of the listening. R29 suggested that it might “depend upon place of posting and nature of work”. R42 pointed out that “since most of what the community (says) is in the form of “complaints” or “problems” faced by them, normally the staff don’t like to listen”. R45 voiced a similar opinion, saying that the department is “not fully open to ideas of community”. “Some of the people do, and some do not and the percentage is 50-50” (R15). R40 mentioned that “there are mechanisms in the department to meet the people at various levels and interact with them, although the follow-up of these is not clear”. R35 however mentioned not seeing such efforts for listening “actually happening on the ground quite often”, which is supported by R8 who said “I am not aware of any instances of FD listening to the communities”. R42 opined strongly that “Forest Departments are not equipped with “ears” that can communicate to the “brains” for formulation of policy. Its role unfortunately is comparable to that of the manager of a reformatory”.

**4.12.4 Ease of communicating with the Forest Department**

The respondents were asked to rate the statement, “It is easy to communicate with the Forest Department”. Overall 73.1% agreed, 15.4% disagreed and 11.5% were undecided (Table 4.17).
Several respondents alluded to the Forest Department being field-oriented and having unique work because the department personnel were available and continuously interacting with the local community. While many felt that in practice communication was easy, a few highlighted the structural issues that impeded communication. The following sections discuss the perceptions of the respondents on these broad areas.

**Field-oriented:** R31 stated that the Forest Department was the “only department with presence in the remotest areas. As such forest personnel are the only group of government functionaries accessible to the people. The functions being performed (are) largely with the cooperation of local people, communication is not an issue with forest personnel”. R39 supported this perspective, and mentioned that “you will find a senior officer like a Divisional Forest Officer sitting in places where sometimes even a junior revenue official is not present. This presence itself means that it is easy to meet and communicate with the Forest Department”. “Officers and staff are posted at the grassroots level” (R7) and “local village level forest personnel, i.e. the Beat Guard, is always local” (R13). Moreover, the staff are available at almost all villages (R43) and are posted close to the community, giving community members easy access to them (R49).

**Work nature:** Implementation of the JFM programme was seen as a reason for the Forest Department being more community-oriented and hence having ease in
communicating (R20, R21). “Forest guards and Foresters regularly visit the communities” (R3) and “issues and things are kept open for discussion and improvement” (R9). R19 felt that “the subordinate staff have good knowledge of the local community” and “we think in the same fashion and serve the same cause” (R22). R50 disagreed and listed major hindrances as “mindset, non-use of technology, no proper mechanism to respond to people, arbitrariness in handling matter and lack of interest”.

Practice: R30 stated that “anyone can approach the forest officials”. According to R10, “it is an accessible department” and “generally open” (R17). “People approach personally. All, from the Beat Guard to Head of department, have mobile phones that are notified to the public. One toll free number (is also available). The Department also has a public domain. (The department can be contacted) through email, video conferencing and radio conferencing” (R11). Others questioned the process and stated that they “have not seen it actually happening on the ground quite often” (R35). They suggested that communication was “effective wherever approached at the right level and with genuine problems” (R41). R42 cautioned that “while it is very easy to meet, drop a letter or email, getting the information and data a common man needs may not be that easy”.

Structure: R42 mentioned that “it is a government department, hence everybody has easy access”. R23 suggested that a strong panchayat system, such as in West Bengal, increased communication. R8 held a different view, believing that “the ‘command and control’ prevents communication”. “Official arrogance more often than not overrides the sense of service” (R46). R41 suggested that the “Forest Department may not always have a solution due to various other influencing reasons viz. socio-political, economic, spatial (and) longer time period”. R41 also suggested lesser availability of staff and multiple roles as possible issues.

Changing organisation: R1 mentioned that the “Forest Department has now become open and ready to listen to the various points of view and mulls over it”. R4 felt that “it is necessary in the present day environment of excessive democracy”. The “Forest Department has now realized that cooperation of communities is
needed” (R12). The attitudes of the “new breed of foresters are quite positive” (R29). R16 feared about additional work load and mentioned that “there is a growing concern to hand over several other works also of other department such as Horticulture etc. to Forest Department”. R40 mentioned that while “efforts have been made … the outcome is not clear”. R5 suggested that the “Forest Department is now open to new ideas and views. However, implementation is still far too low”.

4.12.5 Forest Department as an information source of government schemes

The respondents were asked to rate the statement “the Forest Department informs the community about various schemes”. Overall, 63.5% of the respondents agreed with the statement, 19.2% disagreed and 17.3% were undecided (Table 4.18).

Table 4.18: Response to statement “the Forest Department informs the community about various schemes”

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<td>5.8%</td>
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<td>28.8%</td>
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<td>CF</td>
<td>3.8%</td>
<td>1.9%</td>
<td>0%</td>
</tr>
<tr>
<td>IG Forests</td>
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<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>13.5%</td>
<td>3.8%</td>
<td>7.7%</td>
</tr>
<tr>
<td>Total</td>
<td>63.5%</td>
<td>19.2%</td>
<td>17.3%</td>
</tr>
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</table>

Many respondents were of the view that to effectively implement various schemes there was a need to inform the community. A number of them felt that it was not an option as it had become mandatory. However, while quite a few agreed and suggested various practices should be followed to inform the community, a number of them also disagreed and suggested a need to reconsider the issue.

Need: R27 stated that the “department has to execute the schemes for the local peoples for overall conservation of biodiversity, hence the department has to inform the community otherwise the schemes may fail”. “To run the schemes successfully it informs the people through meetings and by bringing out publications and organizing
fairs etc. where schemes are made known to people” (R1). R2 suggested that informing the community “make these more effective” and “gives us a leverage to implement better” (R2). R12 suggested that informing is important for “…taking their consent for closing the areas for plantation or undertaking other activities”. “No scheme of the department can be implemented without public involvement as 70% of the works are labour-oriented and implemented in remote areas” (R47). R36 mentioned that this happened “wherever people are directly involved and their participation is highly essential”.

**Mandatory:** R4 suggested that “it is mandatory as per guidelines of JFM formulated in 1997”. R23 agreed, “it is compulsory in JFM”. “Participatory Forest Management is the basic principle underlying any schemes undertaken in the district” (R16). R3 and R30 suggested that the Forest Department had to inform the community as most schemes were implemented through the community and the works had to be done by the community. “It is a legal requirement. The schemes are generally for the people – either labour-intensive requiring their participation or community development schemes targeting them” (R31). R5 mentioned that although the “Forest Department informs the community…there is need for greater cooperation and transparency”.

**Practice:** R22 stated that “we, these days, inform all”. “We do organize regular meetings/workshops and fairs such (as) the annual month long Van Mahotsava (the festival of forests) in July and a week-long Wildlife Week in October where various schemes are launched or information is disseminated through talks, exhibitions and community-based programmes, nature camps etc” (R39). “There is a Publicity division, a Forest Department website, e-samadhan (e-solution) besides awareness camps and radio/TV programmes to communicate new schemes” (R40). R10 however was of the opinion that informing the community was selective and did “not always” occur. R46 suggested that “such information is disseminated as routine and not done with enthusiasm”. “Still the majority of field staff is reluctant to effectively discuss the various schemes with the community” (R13). R49 suggested that it was a “mixed result, depending on the concerned individual”. R33 mentioned that “it
depends largely on the structure of the given programme”. “Some information is not shared because of protection problem” (R45). “The regeneration-oriented schemes are being implemented through JFM and the protection functions are primarily with forest personnel” (R52). R42 suggested that while “various schemes and their benefits are being informed…they can be improved”. R15 disagreed and was of the view that “there is very little communication”. I “have not seen it actually happening on the ground quite often” (R35). R50 mentioned that “there is no such system in place”. R48 suggested that “we do not have a decisive / adoptive communication strategy (and) regular meetings with communities (for this purpose) do not happen”. R8 mentions that “there is no such practice in the department. Any communication is reactive (in response to Right to Information application etc.) rather than proactive”. “In fact many times staffs are not clear fully regarding schemes” (R14). R43 mentioned that there was a “lack of publicity” and R29 pointed out that “there is no system to communicate to the community. Most of the schemes remain in the file. Work will be done at the mercy of the field level staff.”

4.13 Summary of results
The Forest Department survey indicated a wide range of factors that the senior IFS officers saw as communication challenges. These relate to challenges at the community level, at the Forest Department level and to other prevailing factors that generally lead to communication breakdown. The survey highlights the current methods of communication as well as areas where adequate communication mechanisms are lacking. Quite a few suggestions were also given for improvement. While there was no consensus on a strategy for effective communication, a number of examples from the field were suggested as communication mechanisms that are worth exploring.

The views of the respondents primarily focused on communication that informs the public about the department’s views such that these are well understood and acted upon. Need assessment, consultation, improved policy and a well-informed Forest Department and community were also seen as important. Although the need to formulate an integrated communication strategy involving all stakeholders was
identifying the overall focus of the suggestions was directed at improvements at the community level (probably because of the community focus of JFM). There was a consensus that building better relationships and trust with the community was necessary for better communication. The majority of the respondents were positive about the Forest Department’s self-image. Most felt that the Department is transparent, does not need to be feared, is open to listen to the community, is easy to communicate with and is a good source of information for various government schemes. However there were still a number of disagreements and suggestions on areas for improvement and the need for more introspection.

Highlighted below are the major communication challenges.

4.13.1 Communication challenges

Community related

Though the community initially seemed to trust the Forest Department, bad experiences, especially the lack of involvement by the community in planning processes resulted in a perpetual lack of trust by the community towards the officers of the department. This factor was seen as an important issue that is repeated in a number of contexts and required to be addressed. Certain characteristics of the community, such as low level of literacy and education were seen as barriers to a better understanding of the JFM programme. Widespread poverty and restrictive social structures leading to narrow mindedness and irrational inhibitions were mentioned as challenges for better communication. Rapidly changing societal values, especially rising aspirations, were seen to be important impacting factors for JFM programmes. Increasing population and conflict between various stakeholder villages over access to diminishing forest resources were mentioned as other challenges that exasperate the situation.

Environment

The existing situation at the community level with respect to other factors that impinged on a good relationship between the Forest Department and community were identified. One of the main concerns was the role of “vested interests”, with
most respondents alluding to NGOs as the culprit who vitiated the relationship. Since NGOs were seen as actors without any accountability but having the resources to engage with the Forest Department and the community, the relationship was seen with both scepticism and hope. Another connected factor was the political and individual interests that bordered on corruption as well as entrenched ego issues.

**Forest Department related**

The respondents also identified a number of issues within the department and with the official personnel involved in JFM. One of the local level issues was the language barrier. The officers were not proficient in dialects and languages that were used in remote areas leading to a lack of easy expression. Also, lack of infrastructure and resources required to develop literature in a local language to inform the communities undermined communication efforts. The Forest Department lost credibility by failing to honour many of its initial commitments, which remained unfulfilled due to issues relating to unclear procedural and systemic guidelines. Moreover, the Forest Department continued to lack clarity regarding the extent of its enforcement and development roles. Very often officers ended up with an unclear description of duties, leading to compromises that worsened the situation.

The respondents also felt that the limited tenure of officers in one place and frequent transfers impinged on stable, long-term planning. Moreover, the respondents felt that the officers were burdened and pre-occupied with administrative work that was detrimental to fieldwork and interactions with local community. Quite often this lack of local interactions led to a poor understanding of local issues. There was also a lack of specific research to identify local needs and to develop appropriate messages.

From the programme point of view, there were unclear goals and objectives. Often stakeholders were also not properly identified. Despite the requirement to maintain public relations on a continuous basis, the front officers lacked formal training in communication and public engagement skills. The officers also lacked understanding of local traditions and knowledge. Further, the attitude of many
officers was seen as too bureaucratic and lacking the sensitivity required for community engagement. Quite often the attitude was to thrust ideas forward and get things done rather than listen and get to know the local issues that were of importance to local people. Postings and transfers in the Forest Department did not take into account many of the attributes required by an officer to handle public engagement. The role of women in the Forest Department was minimal at the field level and many respondents mentioned the need to improve the gender balance in its recruitment.

**Effective communicators**

Another issue identified with the Forest Department was that of not having a designated communicator skilled enough to interface with the community. The communicators could also be identified and recruited from within the community. The advantage of such communicators would be the ability to relate to the community both in terms of language and culture. They would be culturally sensitive and be able to understand the perspectives of the stakeholder. While NGOs too could play an effective role in helping with communications, they would require relevant training. NGO’s could be facilitators and mediators and harness the “social capital” through having regular contact with the community.

**4.13.2 Communication mechanisms**

A number of new communication mechanisms were recognised along with a range of issues with the existing mechanisms. These are listed below:

1. A primary channel for feedback was not institutionalized and was highly dependent on field staff and their personal initiatives.
2. The Forest Department officers recommended that existing rules and procedures needed to be simplified and disseminated effectively. It was mentioned that it was difficult for communities to decipher the relevant rules and procedures applicable to them. While a number of effective mechanisms for dissemination have been suggested, the actual use of these mechanisms
has remained limited due to lack of resources. Existing strategies were seen as inadequate as those were perceived ineffective.

3. Mobile phones and internet were seen as potential tools for communication (and already in use in some places).

4. The Forest Department did not designate a contact person for interacting with the communities. Individual roles of the Forest Department staff related to communication were unclear.

5. While the personality of officers was seen to affect the communication with the community, no criteria were followed when selecting individuals for posting in JFM areas.

6. The officers believed that they often got the opportunity to have one-on-one meetings with the community. However based on their last interaction with the community, only a small percent of senior officers actually seemed to have managed to meet with the community in recent times.

7. Most officers thought that their state did not have a communication strategy, even though it seemed to have one. However, most state level communication strategies were also seen as outdated and related to the use of wireless equipment.

8. Overall there was a growing recognition by the Forest Department of the role of NGOs as a beneficial and indispensable partner, but it was suggested that the widespread lack of accountability and vested interests in the NGO sector in India required careful scrutiny before selection of the right candidate.

9. Officers perceived the Forest Department as somewhat transparent, likely to be open to listening and communication, as a good source of information for government schemes and less of a feared “police” than before. There were many who suggested that current scenario in the department was far from ideal and that there was need for much improvement. Narratives of forest officers suggested a strong divide between the Forest Department and village communities.

The next chapter explores the situation prior to the formation of Joint Forest Management and some of the incidents that were crucial for its evolution.
CHAPTER 5: EVOLUTION OF JOINT FOREST MANAGEMENT

5.1 Introduction
This chapter examines the evolution of Joint Forest Management (JFM) in India. There are many narratives about a number of sporadic initiatives across India that seem to have contributed to JFM initiation. The challenge is to identify the communication that happened between various individuals, agencies and the mechanisms that were used that gave rise to the JFM Guidelines of 1990.

I start with a brief discussion of a few popular initiatives prior to the JFM Guidelines of 1990, specifically Arabari, the Chipko movement, and Sukhomajri. This gives the larger context as these initiatives are generally understood as precursors to the JFM policy and collectively thought to have influenced its development (Springate-Baginski & Blaikie 2013; Balooni & Inoue 2009). While there are no doubt that these events had a crucial role in setting the scene for the development of policy, there are very few records of the actual processes that seemed to be the direct cause that triggered the process which culminated in the Guideline of 1990. There is another narrative, though less known, which is of importance to understand policy making. The story is known to a few and is rarely discussed in academic or practitioner circles. I had access to this story as I was fortunate to have worked with the main proponents who were involved in many of the important tasks leading to the policy. The reason why it is important to know this facet of policy making is the often unorthodox ways and triggers that constitute policy making in India. The processes underscore the lack of transparent mechanisms that allow for robust discussions and decisions that are evidence or value-based.

While I trace the larger context, I also look at the pre-JFM situation in the state of Gujarat and specifically from the region in which my research villages are situated. There are very few published documents of the important initiatives that happened in the region, some related to individual initiatives that impacted policy and others undertaken by some conscientious officers of the Gujarat Forest Department that directly impacted local communities. I also discuss the institutions that were created
at the local, divisional and state level in Gujarat and other national level institutions that facilitated the process of implementation and policy dialogue.

I attempt to analyse the situation using a Communication – Governance model, based on the theoretical works of Margaret Archer and Bruno Latour\(^\text{21}\), introduced in the sixth chapter. Along with the findings from my surveys of senior Forest Department officers and tribal communities on communication, this model is one of my main contributions to research.

### 5.2 Methods
During the course of this research I met and interviewed a number of Forest Department officers, NGO personnel, and private individuals interested in JFM (see Chapter 2: Research Methods for details). A number of senior Forest Department officers from Gujarat (Additional Principal Chief Conservator of Forests, Chief Conservator of Forests and Conservator of Forest), mid-level (Divisional Forest Officers) and junior level (Range Forest Officers and Foresters) were interviewed to get a cross section of their views. Over a period of fifteen years however, both working and researching in the area, I had also met with a number of individuals interested in or impacted by JFM and gathered invaluable insights, which form part of my field notes. A number of peer-reviewed research papers, reports, news items and other published literature including my first-hand experience is used to reconstruct this history of JFM narrated from a practitioner-researcher’s perspective.

### 5.3 Pre-JFM situation
India has a rich record of flora and fauna. Since ancient times, these have been meticulously recorded in written and oral form and handed down through the generations. The use of Sanskrit to communicate between different parts of the subcontinent was common. Regular prearranged melas (fairs), such as the Kumbh Mela, were a major source of information dissemination across the regions. The

\(^{21}\) I have discussed the basic theoretical constructs of Margaret Archer and Bruno Latour in the Introduction chapter of my thesis.
Ramayana, an ancient Hindu epic, has detailed records of different plants and herbs species across India and these have been verified by modern researchers (Balapure et al. 1987). This epic has one full book devoted to forests, an indication of the importance given to forests at that time. The ancient practice of Ayurveda, a medical system, which is still practiced, meticulously records the uses of various plants and herbs for healthy living and for medicinal purposes. There are references in the Agni Purana (another ancient Hindu scripture) on the need to protect trees.

In India’s pre-colonial period (1000 B.C. to 1800 A.D.) it is widely believed that the forests in India were managed on a sustainable basis primarily because the ownership largely rested with the community (Gadgil 1990). During Emperor Chandra Gupta Maurya’s time (around 300 B.C.), the importance of forest was well recognised and high ranking officials were put in charge of its management (Padhi 1982). Specific rules existed for the extraction of timber, which needed a permit from the local ruler (Bhat et al. 2001). The importance of managing forests was somewhat reduced during the Muslim invasion with more emphasis placed on hunting preserves and gardens by the Mughal emperors. Despite this intermittent control on forest by local rulers, forest use during the pre-colonial period was mostly under the control of communities and was extensive and sustainable.

This community control of forest-use shifted during the British colonial period from the late 18th century with the proclamation of the Crown Land Ordinance in 1840 (Saxena 1997). All forests, wastelands and lands that were unoccupied and uncultivated were transferred to the crown. The Indian Forest Act of 1865 and the Indian Forest Act of 1878 laid claim over all wasteland, which by definition included forests (World Bank 2006). While the colonial forest policy provided for claims from those having existing rights or practices to contest them, this was hardly resorted to

Many conservation practices including practices such as sacred trees and sacred groves existed. Many exist even today and I came across these sites in my research villages as well. However, these sacred trees and groves have systematically been reduced in size and are now small patches surrounded by agricultural farms.
by the illiterate local community within the three months given to them to do so (Saxena 1997). Ironically, the shift from community to state control was done under the pretext of conservation and scientific management based on the values of forests, whereas the main focus was exploitation of forest and for earning revenue (Bhat et al. 2001; Jewitt 1995). Despite public opposition, the shift to state control continued, with 96.79% of forest declared as Reserve Forests, restricting the entry and usufruct rights\textsuperscript{23} of local people (Bhat et al. 2001). The other category that was declared under the Indian Forest Act of 1927 was the Protected Forest, under which the community had certain rights to gather forest produce for personal consumption (Saxena 1997). It is estimated that by 1900, 40% of the land area was under forest, but that this had reduced to less than 25% at the time of independence (Bhat et al. 2001). Due to loss of access and control, conflicts over forests were already common features during the pre-independence period and some of the well-known resistance to colonial struggle is documented by the uprising of tribal communities regarding forest rights (Guha 1983).

After Indian independence in 1947, the state control continued with more forest area being nationalised, mainly due to the princely states (along with their forests) ceding to independent India during its reorganisation. However the administration and its practices did not change. Rather, there was increased exploitation for timber and transfer of land for non-forest development activities including agriculture, resulting in low forest cover. This created extreme difficulties for rural communities, with basic items, such as firewood and fodder, becoming limited in supply from the shrinking forest areas the community had access to. The local Forest Departments paradoxically continued their efforts to save the remaining forest from further degradation from communities that had used and managed forests extensively all over India from medieval times.

\textsuperscript{23} These are partial rights given to individuals or groups allowing them the use of forests for resource extraction.
Inevitably, by the 1970s, the low forest cover and restricted access to forests led to an increased incidence of forest-related offences (such as cutting trees for firewood without government permission). Despite this situation, the Forest Department along with contractors continued large scale clear felling\(^{24}\) of forest until the Supreme Court took a proactive role while hearing the Godavarman case in 1995 (Rosencranz et al. 2007). The court, in its order dated 12 December 1996, banned the cutting of forest or diversion of forest land for non-forestry activities and stated that clearance at the Central level and compensatory afforestation would be required for forest land to be used for non-forest activities \(^{25}\) (GOI 2013).

However by the 1980s, the situation in the rural areas of South Gujarat had already reached a level of desperation\(^{26}\). Due to progressive degradation, estimated to have affected about 50% of the forest land, Gujarat had already banned further felling on public forest lands in 1986 (Poffenberger & McGean 1996). An elder in my study village of Makanjhar recollected that the situation was so bad due to lack of firewood that families had started digging up the stumps and roots of the cut trees, a last resort, detrimentally impacting natural regeneration. It was against this backdrop that the drive for social forestry in non-forest land and initiatives by some enterprising forest officers on forest lands started emerging.

Social forestry, launched in 1980, was a national effort and there were many different innovations by the Forest Department supported by international aid

\(^{24}\) Clear felling is a management tool used by the Forest Department. A demarcated area is completely cleared of natural forests (whatever be the age or species composition), and then planted with “commercially and ecologically” suitable species. The English word ‘clear felling’ was a common word used by many adult community members in the research areas as they had worked as labourers for the contractors to cut down the trees. An exception to this visible outcome of denuded hills is the few lone trees of scattered *Bombax cieba* that has traditional significance and hence escaped the local axe.

\(^{25}\) See Godavarman case.

\(^{26}\) Discussions with elderly village community members and Forest Department officers from south Gujarat.
agencies to improve the tree cover in non-forest areas (Arnold 1990; Singh 2000). This was also the beginning of a link with the community in a number of different ways. Initiatives in social forestry extension were seen as a breakthrough in building relationships between the Forest Department and local communities and institutions, such as schools, hospitals, public works departments and irrigation departments, and were used to co-opt them into the task of growing trees. Seedlings from the Forest Department nurseries were distributed (mostly free of cost) for planting in areas owned by individuals or institutions. Many non-governmental organisations such as the National Tree Growers Cooperative Federation (NTGCF, now, the Foundation for Ecological Security, FES) worked exclusively in promoting the planting of trees in non-forest commons that were under the revenue department and often under the control of the village panchayat. Here the model was to organise communities to plant and protect trees in non-forest areas. In social forestry, community contact and communication with the Forest Department was minimal in the initial stages. In later years however, it became necessary for these communities to contact the Forest Department for a “transit pass”, a requirement when timber is transported from one place to the other.

Other than social forestry, many sporadic initiatives that challenged the dominant management model of the Forest Department to economically exploit forests for timber had also started emerging across India from 1970s in the forest areas. A major portion of the Forest Department budgets and management was related to afforestation – which often failed, hence the economic/production model was not feasible in many forests as there were no economically exploitable trees27. The emerging initiatives departed from the Forest Department's insular approach and for the first time started a dialogue with the local communities. Discussions were initiated with the village communities for the protection of neighbourhood forests. In return for the communities' efforts, the Forest Department offered a share of the benefits from the regeneration with the communities that participated. Most of these

27 Discussions with Ajit Krishnaswamy, ex-senior Indian Forest Service officer.
were the result of well-meaning Forest Department officers surpassing their official brief and looking for solutions within a larger framework that included local people. However well-meaning the officers, most of these actions were also a reaction to the increasing hostility towards the Forest Department and the desperation by the Forest Department as scientific and planned forest management was resulting in barren forests due to externalities that the Forest Department had continued to ignore (Pathan et al. 1991).

A brief history of the main national policies that exist in India and which are relevant to forests is provided below.

**5.4 Forest policies in India**

The Indian Forest Act 1927 is the main Act that regulates the management of forests by the States, and together with the Wildlife Protection Act 1972, provides the principal legal framework. The Forest Conservation Act 1980 is among the most stringent of regulatory statutes in the country, and is intended to control deforestation. It has placed strict controls on the diversion of forestland for non-forestry purposes. Biodiversity conservation has been made an integral part of forest conservation and various legislative measures have been taken to strengthen conservation.

In 1988, the National Forest Policy and in 1990 the Joint Forest Management Guidelines of the Government of India initiated the paradigm shift in management approach with provisions for partnership in forest management involving the local communities. Each state issued administrative and procedural orders to implement Joint Forest Management.

Forest policy and planning in India is a concurrent responsibility of the central and state governments. Forestry is also directly linked to overall land use. Hence forest policy and legislation flow from, and constitute a part of, the national land use and

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28 The Concurrent list is a list of 52 items given in Part XI of the Constitution of India that mentions the relationship between the Union and States.
legislative framework for natural resource management and use. The National Forest Policy 1988 embodies the principles of sustainable forest management and India’s forests are treated primarily as environmental and social resources and only secondarily as a revenue or commercial resource. This constituted a major shift in management from resource conservation and extraction by the Forest Department to involvement and resource sharing with primary resource users living within and near forest areas.

The National Forest Policy 1988 also envisages people’s involvement in the development and protection of forests. The requirements for firewood, fodder and small timber such as house building material of the tribal and other villagers living in and around the forests are treated as the first charge on forest produce. As one of the essentials of forest management, the policy document envisages that forest dependent village communities identify themselves with the development and protection of forests from which they derive benefits. On 1st June 1990, the Ministry of Environment and Forests, Government of India, adopted the principles of “care and share”, highlighting the need and procedures for the involvement of village communities and voluntary agencies in the protection and development of degraded forests, popularly called the “Joint Forest Management (JFM) Guidelines”.

The 73rd amendment to the Indian Constitution (1992) made it mandatory for all states to decentralize governance through a three-tier structure viz. the State, District and Local Bodies (called Panchayati Raj Institutions or PRI). Among the 29 functions recommended for decentralization, three relate to forestry, i.e. Social Forestry, Fuel Wood Plantations (i.e. firewood plantations), and Non-Timber Forest Products (NTFPs). Thus, the legal basis for effective people’s participation in forest protection and management is probably now available. The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act 2006 is a key piece of forest legislation passed in India on December 18, 2006 that furthers the rights of the people in relation to forests. It has also been called the "Forest Rights Act" (FRA), the "Tribal Rights Act", the "Tribal Bill", and the "Tribal Land Act". The law concerns the rights of forest-dwelling communities to forest land and other
resources which were denied them for decades as a result of colonial forest laws in India. Even though the law deals with forest land, the Ministry of Tribal Affairs, which initiated this Act, is the designated nodal agency for its implementation.

In the following sections, the situation that led to the formation of JFM by the national government is described. This section also highlights the history JFM policy formation. This is followed by some of the key roles played by key individuals outside government that are often not mentioned, and which probably triggered the formation of JFM policy. This is important as forming policy by the government is often seen as a result of consultations and meetings by experts and committees. In essence there could be many more ad hoc triggers that “prompt” the government or individuals in the government to take far-reaching policy decisions.

5.4.1 Experiences from Arabari, the Chipko movement and Sukhomajri

The events at Arabari and Sukhomajri, in the states of West Bengal and Haryana, respectively, are two of the very prominent examples of community involvement prior to JFM in India. Both of these were initiated by government departments entering into a dialogue with the local communities.

**Arabari**

In 1972, Ajit Bannerjee, a Conservator of Forests in West Bengal, initiated an “experiment” (Arabari Socio-Economic Experiment) to reduce the problem of illicit grazing and cutting of trees in Arabari in Midnapore district. Discussions by the Forest Department with the local community led to an informal agreement for the protection of the forest between the two parties. This initiative covered 618 families to protect 1186 ha of degraded forest land (GoWB 2007). In this case communication channels were established by the Forest Department with local communities through meetings and dialogues. The presence of a senior Forest Department officer gave credibility to the process. The arrangement was informal and ad hoc. No written agreement was signed but an oral understanding was established, with written agreements to follow.
**Sukhomajri**

Sukhomajri village is situated in Haryana, a northern Indian state near the Shivalik Hills, which are the foothills of the Himalayan Mountains. The Shivalik Hills form the upstream catchment area for Sukhna Lake (near Chandigarh). Due to a high severity of erosion in the Shivaliks, silting of Sukhna Lake became a severe problem. In 1977 under the guidance of P.R. Mishra, who was working with the Central Soil and Water Conservation Research and Training Institute (CSWCRTI), two earthen dams were built to conserve rain water and to stop the rapid erosion threatening to create runoff and degradation (DTE 2001). This became a starting point for the community to initiate protection of the catchment, initiate afforestation and stop grazing to stop sedimentation of their dams. Water that was collected in the dam was equally divided among the villagers, including the landless. The landless sold water to the land-owning farmers and this provided a big incentive for the landless who were mostly graziers and often did not own land. The CSWCRTI played a crucial part in initiating this experiment as part of its integrated watershed development programme (Balooni & Inoue 2009). Later the Forest Department gave community rights on grass in return for a royalty that was equivalent to the amount they had been getting before the watershed (DTE 2001). A study by S. K. Dhar estimated that the tree density increased from 13 per hectare in 1976 to 1272 per hectare in 1992 (Agarwal & Narain 2000). The institution that was created was called the Hill Resource Management Society (HRMS) and was replicated in a number of villages across the region.

**The Chipko movement**

*Chipko Andolan* (or the embrace movement) is one of the most discussed Gandhian movements: Villagers initiated a non-violent protection of trees against felling by the Forest Department contractors. In 1973, resistance was organised by the Dasholi Gram Swarajya Sangh (DGSS), a local Gandhian organisation at the Mandal forest in Uttarakhand. The more famous resistance happened in 1974, when women from Reni village in Chamoli district protected the Reni forest by not allowing the contractors to cut trees. An elaborate plan was made by the local Forest Department to have the men folk and DGSS activists away from the area, so that felling could be
done without any resistance (Guha 2000). In the absence of the men however, the women stepped forward and protected the forest from the contractors from felling.

The *Chipko* movement influenced many across India. Sundarlal Bahuguna, one of its main proponents helped spread the idea. The approach was later adopted as a means of non-violent resistance to halt ecological destruction by campaigning not only against forest contractors, but also against the mining industry’s impacts on communities and the environment. Its effect was felt as far away as the Western Ghats in south India, where similar movements (the *Appiko* movement) by local communities helped stop forest felling.

Senior Forest Department officers continue to quote these and other similar initiatives in India as examples of good communication experiences (even though the initiatives were in many cases against the Forest Department). Other examples of good communication both pre- and post-JFM include: Bishnoi in Rajasthan, Great Himalayan National Park in Kulu, Himachal Pradesh, the Maozigendri Movement in Manas, Assam, the Young Mizo Association in Mizoram, Kugti Wildlife Sanctuary in Himachal Pradesh, and Dhubri and Aie Valley Divisions of Assam.

There are also quite a few self-initiated protection groups, many of them predating JFM by many decades. Better known amongst these are the self-initiated protection groups by communities spread across the state of Orissa. In the hills of Uttar Pradesh there are examples of *Van Panchayats*, again a completely local phenomenon which received legitimacy from the local government to protect and use the local forest.

While there have been innumerable such cases from across India, I will focus on two cases that played an important role in community-led forest protection, locally and nationally. Both these cases originate from my research region of south Gujarat. While one of them played a very important role in reversing the rapidly increasing

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29 Source: Forest Officer’s survey that asked for examples of good communication experiences.
conflict between Forest Department and the community, the other example is a unique combination of circumstances and actors that played an important role in policy change leading to greater community involvement in forest protection. In fact, this case could probably be considered as the trigger that set into motion the formation of the JFM Guideline of 1990. The role of communication in both these cases was novel and illustrative of the functioning of the government.

5.4.2 R.S. Pathan and South Gujarat

R.S. Pathan was the Conservator of Forests in Surat Circle in south Gujarat in mid-1987. This Circle is also the home to a large number of tribal communities, and some of the richest forest areas in Gujarat. Forest Labour Cooperative Societies (FLCS) had been initiated as an experiment in 1970 (Trivedi 1993). The FLCS were Forest Department initiated cooperative societies, with the novel idea of sharing a percentage of the income (about 20%) that was made from the harvest of timber. Primarily, the forest was allocated to contractors to clear-fell trees, and local communities were involved as labourers in cutting and transporting the wood. While the community initially only received wage income for the labour work, after the formation of the FLCS, the community received both wages and a portion of the net profit, to be used for community development.

Though the Forest Department had connected with local communities through the FLCS, the number of individuals from each village that took part in labour activities was low. The majority continued to face unemployment and lack of access to forest resources. In Dantali village in Vyara Taluka (sub-district) of Surat district, not very far from the research villages, illicit commercial felling was so heavy that the forest officers could not enter the forest (DTE 1995). Over five years (1985 to 1990), a record 383 forest officers were assaulted in confrontations related to the protection of forests (Pathan et al. 1991). Such confrontations in the pre-JFM phase increased the Department versus village community conflict, which came to a head when
Forest Department staff were assaulted and burned to death in a Forest Guest House\textsuperscript{30}.

R.S. Pathan, the then Conservator of Forests of Surat Circle, realised the complete breakdown of the relationship and communication with the community and the very urgent need to address this. In his young days he had been influenced by the Gandhi’s Satyagraha movement which was part of the non-violent movement for India’s independence. Taking a cue from Gandhi’s movement, he initiated a \textit{padyatra} (this translates literally from Sanskrit as “journey by feet”) through some of the villages most affected by forest confrontations in his Circle. Along with a few forest officers and community leaders (many from the existing Forest Labour Cooperative Societies), he visited scores of villages where he listened to the villagers’ complaints. Such an approach by a senior forest officer was unheard of in India. Pathan’s unique style of listening to the community paid off as community leaders were able to freely discuss and communicate with him. An estimated 30,000 individuals from 80 villages were contacted during this 3-day walk (Pathan et al. 1991). Not only were the communities able to connect with him but they also developed a trust for this forest officer\textsuperscript{31}. Encouraged by the discussions and the need to find a solution together, many meetings in open forums were conducted. Two of the most urgent and important requirement identified was firewood and fodder.

Within the existing framework, the Conservator of Forests had the power to sanction cutting of young trees and bushes (known as “cutback”) and grass for the community. Cutback is done when young trees are pruned to allow for efficient nutrient intake and to encourage trees to grow straight for good timber. This was possible only when the trees reached a certain age. Grass on the other hand is very quick to grow. By offering these benefits in exchange for protection of patches of

\textsuperscript{30} Personal communication with R.S. Pathan.

\textsuperscript{31} In my later meetings with many community leaders in the area, there are instances when they fondly remember Pathansaab, as he was respectfully called.
both barren and high forest, R.S. Pathan was able to get a large number of villages (about 200) to begin protecting forest near their villages (Pathan et al. 1991). He thus converted much of the illicit felling into organised cultural operations (DTE 1995). Makanjhar was one of the villages that took part in the protection of forest following these initiatives.

The communication strategy that R.S. Pathan used was direct and oral. The community accepted the oral agreement, there were no meeting minutes or recordings of these happenings in either village records or Forest Department records. R.S. Pathan took personal notes at these meetings. A paper written by R.S. Pathan, R.J. Arul, and Mark Poffenberger is one of the few written records that is available (Pathan et al. 1991). R.S. Pathan continued to work on facilitating community and Forest Department dialogue for Joint Forest Management even after his retirement32.

The impact of this initiative was so great that forest offences dropped drastically in following years (Pathan et al. 1991). More importantly, the first set of villages that had protected the barren forests obtained their initial harvest of grass. This grass was equally distributed to the households that took part in the protection and cutting of grass. Meanwhile a visible amount of growth was taking place from those roots that had escaped destruction. The grass harvest was substantial and this boosted the morale of the community to continue protecting the forest for both grass and for possible firewood. These experiences set the stage for models that could be adopted for JFM. However, while information about this positive trend was available with the senior officers at the state level, there was very little policy and legal space within the existing forest policy framework to legitimise the involvement of communities in forest management. This required another set of actions involving

32 Years later in 1997, R.S. Pathan was the first Coordinator of the newly formed JFM Cell of Gujarat state. Its role in strengthening implementation and policy through Divisional Level Working Groups and a number of extension activities is discussed later in the chapter.
actors outside local communities, which happened in another corner of the same forest Circle a few years later.

5.4.3 Anil Shah, Soliya village and the 1990 JFM Order

Anil Shah was CEO of the Aga Khan Rural Support Programme, India (AKRSPI), one of the many NGOs working in Gujarat. Prior to joining AKRSPI, he was in the Indian Administrative Service (IAS) and had worked in Gujarat as Secretary, Rural Development. This background gave him a good reach within the state and national bureaucracy (Springate-Baginski & Blaikie 2013).

AKRSPI was also one of the few NGOs with an international context. While AKRSPI was independent of its parent organisation, the Aga Khan Foundation (AKF), it had close linkages with it, relating to both funding and other support. This linkage also gave AKRSPI access to the larger Aga Khan Development Network (AKDN) at the international level. The board members of the AKRSPI were senior government officers, industrialists and philanthropists. AKRSPI, hence, was endowed with good long-term access to funding as well as knowledge networks of individuals and organisations that were national and global.

The tribal areas of South Gujarat was one of the three areas that AKRSPI chose to work in Gujarat. The prime reason for choosing South Gujarat was the poverty in the area and rapid degradation of natural resources. Massive seasonal out-migration for employment was rampant, creating economic and social issues in the region. AKRSPI is headquartered at Ahmedabad with its implementing teams, called the Spear Head Teams (SHTs), located near the villages. In South Gujarat, it’s SHT is located in Netrang, a small town about 45 kilometres from Mandvi town. In the early 1980s, the team at Netrang initiated efforts to establish itself through community-based natural resource management (CBNRM) activities. It was during this period, when it was in the process of dialogue with many villages, that it had its first meeting in the village of Soliya in 1985 (Tewari 1996).
Soliya village is situated in Dedipada Taluka of Narmada District\(^{33}\). When AKRSPI first came to the village in 1985, the situation was similar to that of many other villages of Bharuch and neighbouring districts which had massive out-migration and low agricultural production. The community had difficulty getting adequate firewood, fodder and timber for their livelihood needs. In the meetings held in the village the AKRSPI staff noticed that there was a large denuded patch on a hill near the village. It used to be covered with forest but had been cut down by Forest Department contractors. The denuded condition was accelerating due to rampant illegal cutting by villagers. In one of the meetings, afforestation of this area became a discussion point. It was felt that afforestation activities would not only bring in much needed employment for the community but also help arrest soil erosion and degradation. The area was also very near to the village which would make it easier for the community to protect.

To begin these tasks, the NGO suggested the formation of a village institution named the Gram Vikas Mandal (GVM, translated as Village Development Committee) to coordinate tasks in the village. Since this was the first time AKRSPI was assisting the community to plant trees in a forest area, the NGO approached the Forest Department and got approval for the plantation from the Divisional Forest Officer posted in Rajpipla (Tewari 1996). The GVM, with financial assistance from AKRSPI started village nurseries, and during the monsoon seedlings from the nurseries were planted in 17 hectares of forest. Later, AKRSPI also undertook further plantations in non-forest areas with funding from the Integrated Wasteland Development Programme (IWDP) initiated by the then recently formed (1985) National Wasteland Development Board (NWDB)\(^{34}\).

\(^{33}\) The area has been administratively reorganized. Previously, in 1985 the village was situated in Dediapada taluka of Bharuch district.

\(^{34}\) Personal discussions with Shashidharan who was then the Program Coordinator of Aga Khan Rural Support Programme (India) at Netrang.
In 1989-1990 issues cropped up in the informal arrangement that existed between the Forest Department, AKRSPI and the community. A new Divisional Forest Officer was posted in Rajpipla and the officer found faults with AKRSPI’s functioning, especially related to finances\(^{35}\). Subsequently, planting of seedlings in the forest area with finances from the NGO was seen by the Forest Department as illegal due to existing forest-related laws. As dialogue with the local Forest Department did not make any headway, AKRSPI approached senior Forest Department officers at the state level for clarification. But the state government could not provide clarity as such a case was unprecedented.

Since there were limitations to what the state government could do, Anil Shah, decided to approach the Ministry of Environment and Forest with the objective of clarifying the role of NGOs. There was also a need to get legitimacy for such arrangements as informal agreements with local officers were fraught with the danger of being overturned when new officers came in. In early 1990, Anil Shah along with V.B. Eswaran and Samar Singh, all of them ex-Indian Administrative Service (IAS) officers met with the then Secretary, Ministry of Environment and Forests, T.N. Seshan\(^{36}\). Initially it was difficult for the three of them to get an appointment with T.N. Seshan, although being ex-IAS officers themselves helped. Anil Shah explained the situation to T.N. Seshan which included the issue of being termed illegal even if the community wanted to help regenerate the forest and plant seedlings. A need for a change so as to allow the community to play a more active role and allow for other agencies to help in the regeneration of forests was

\(^{35}\) Tewari (1996) reports that the issue arose when the Forest Department wanted the community to plant saplings free of cost. The community refused as AKRSPI was paying them daily wages for labour work in the previous forest plantation works and they did not see a reason why the Forest Department could not do the same. When AKRSPI offered to give an interest free loan to the community to do the plantation, the Forest Department found that as a way through which AKRSPI is staking claim on the share from the forest produce to be realized at a later date. Personal communication with Shashidharan, the then Program Coordinator suggests that this was a rumour spread by the Forest Department, and the interim finance was for protection works.

\(^{36}\) Personal communication with Anil Shah, Chairman of Development Support Centre.
discussed. Anil Shah also gave a note on possible ways to improve the situation. After seeing the potential of such a decision, Seshan advised the three of them to meet the then Minister of Environment and Forest, Maneka Gandhi. After meetings with Maneka Gandhi, a few other suggestions that came up were incorporated into a policy document. Six months later in June 1990 the national JFM Order on JFM was circulated to state governments. The JFM Order included clear directions for the involvement of NGOs in JFM. They were to interface between the State Forest Departments and communities to develop degraded forests. During the interim there were no reported public discussions or deliberations by the ministry at the national level.

5.5 Development of mechanisms for policy and practice

5.5.1 JFM networks
Policies are often developed without adequate consultations and discussions with different stakeholders. After the emergence of JFM, which in itself was a new initiative for the Forest Department, the need for mechanisms for regular interaction became a necessity. At the national level, a Joint Forest Management Network was established in 1993 to discuss the success and failures of experiences of JFM across India. What started as a discussion forum soon became organised and the documentation of JFM-related research and best practices was attempted. The network was housed in a national NGO, the Society for Promotion of Wasteland Development (SPWD).

However, the JFM network, while providing space for discussions and information exchange, could not adequately resolve situations that were emerging in the field. A study by the Aga Khan Foundation in 1997 based on four western Indian states identified a number of bottlenecks at the implementation level that were affecting the operationalisation of policies37 (Chandran & Pastala 1998). The study also found that

37 This was one of the earliest studies on JFM that suggested that good policies are not enough and there is a need to monitor and develop adequate enabling mechanisms for implementation. The study began with the objective to identify areas for policy advocacy but the
for resolving local issues, stakeholders need to conduct regular communication with each other. The research suggested the formation of Divisional Level Working Groups (DLWG) as a mechanism whereby the primary stakeholders, the communities and the Forest Department could meet on a regular basis to resolve operational issues. These results were also shared with the Ministry of Environment and Forests at the national level and with Gujarat Forest Department at the state level.

5.5.2 JFM working groups
The Gujarat Forest Department had initiated a State Level Working Group (SLWG) in 1991. The SLWG members constituted the PCCF, senior CCFs, NGOs and key individuals working on forests in the state. This was a key mechanism where operational difficulties were brought to the notice of the Forest Department both by the Department and by NGOs. When the idea of a Divisional Level Working Group (DLWG) was mooted, the Department was therefore receptive. To strengthen the DLWGs for their many functions (including training, information dissemination, creation of a data base, and working in collaboration with the Forest Department) a JFM Cell at the state level was initiated.

5.5.3 JFM Cell
In 1999, the Gujarat Forest Department in collaboration with the Gujarat Ecological Education and Research Foundation (GEER) and the Aga Khan Foundation decided to institute a JFM Cell. The GEER Foundation is fully aided by the state government with the Chief Minister as ex-officio Chairman and Forest Minister as ex-officio secretary of the Foundation. In the 14th meeting of the SLWG a nodal “JFM Cell”

results substantially changed the perspective of donor communities, leading them to address issues at the level of implementation rather than continue to advocate for policy change without adequate implementation.

As a representative of the Aga Khan Foundation, I was instrumental in discussing the modalities of initiating the DLWG with senior Forest Department officers in Gujarat.
was established in the state. The JFM Cell reached to over 1500 villages within a period of two years. Its major achievements were in promoting DLWGs, training of Forest Department officers, feasibility planning, a bimonthly newsletter, and many other support functions for the improvement of JFM. The effort was recognised by the Ministry of Environment and Forests at the national level and by the Forest Department at state level (Chandran 2014). The JFM Cell was co-opted as member of the Gujarat SLWG by the Gujarat Forest Department and was invited by the MoEF for many of its “Nodal Officers of JFM meetings” at the national level (Letter dated 12.11.1999 No 22-8/98-FPD, MoEF, Forest Protection Division).

A similar unit called the JFM Monitoring Cell was also created nationally at the MoEF in its Forest Protection Division at about the same time as the JFM Cell in Gujarat. The Cell was mandated to monitor the performance of JFM across the nation and develop programmes and policies to improve it. Along with the Cell a consultative, multi-stakeholder, JFM Network was also created by the MoEF at the national level to act as a forum for JFM deliberations.

5.5.4 Forest development agency

In 2001, as part of the 10th Five Year Plan, a committee constituted by the Ministry of Environment and Forests was tasked with the job of preparing a proposal for a national level JFM Scheme. The objective was to address the lack of funding for the JFMCs and their almost total dependence on state budgets. The main structural design for the implementation of the Scheme was to have funds reach the divisional level of the State Forest Department, directly bypassing the state level in a way similar to the existing District Rural Development Agencies (DRDAs). These

The author was responsible for the negotiation and developing collaboration with the Gujarat Forest Department for the creation of the JFM Cell.

The author was in correspondence with the MoEF during liaisons with the Gujarat Forest Department for the creation of JFM Cell at the state level.

The author was member of the Consultative Committee and part of the four members drafting committee set up by the Consultative Committee.
initiatives culminated in the formation of Forest Development Agencies (FDAs) to implement the National Afforestation Programme (NAF) under the National Afforestation and Eco-development Board (NAEB), Ministry of Environment and Forests. On March 2008, the programme was operational in 782 FDAs involving 28,282 village level Joint Forest Management Committees (ICFRE 2008).

Each FDA consists of a Chairman (the Conservator of Forests is the ex-officio Chairman) and a CEO (the Divisional Forest Officer being the ex-officio CEO). The FDA consists of all JFMCs under a Forest Division and is registered under the Societies Registration Act of 1860. To obtain funds, the FDA makes a proposal and sends it to the NAEB. The funds are then disbursed through the FDA to the JFMCs, although the management of funds remain with the Forest Department officials. While the mandate of the FDA is broad, with the specific aim of strengthening the JFMC, the mid-term report on its progress mentions continued gaps in its functioning (ICFRE 2008). The impact of the FDA on the study villages has been marginal, as substantiated by the community survey in the research villages where the FDAs had a low score as a source of information (Table 3.3, Chapter 3).

Despite the poor performance of the FDAs on a number of indicators, the potential for this institution to be a mechanism for communication exists, both for the state and at the national level. Currently, limited efforts are being made to systematically record the issues faced by member JFMCs, and to transmit these concerns to higher levels in the Forest Department for compilation and any necessary procedural or policy actions.

5.5.5 Institutional clarity

Despite these mechanisms some of the core challenges continue to affect the functioning of JFM. In early 2001, an advisory was given by the MoEF for registering the village committees under the Societies Registration Act of 1860 and to prepare community-based Microplans (MoEF 2014). Even after a decade, neither of these requirements have been fulfilled. Microplans prepared at the village level have to follow the larger technical plans of the Forest Department. Village institutions are heavily influenced by the Forest Department both - for its activities and for funding.
Despite the creation of an Institutional Maturity Index as a way to assess the health of JFM institutions in the first JFM network meeting in 1993, they are not monitored. In the absence of adequate mechanisms and processes that can monitor progress and inadequacies, policy makers do not have the necessary information on the performance of JFM at the community level. There are no clearly formulated stages and supporting flow-charts to describe the process to be followed in a JFM cycle from initiation to harvest of forest products in any of the States, leading to haphazard decisions and increasing lack of trust in JFM.

5.5.6 Role of the panchayats

Panchayats are local government bodies that have been functioning since the 1950s in many states of India. In 1992 the Indian Constitution in its 73rd amendment gave the panchayats constitutional backing. Devolution of power to the community was one of the main objectives. The role of panchayats in JFMC has been co-opted in many states by including committee members from the panchayats in the JFMC. However, no clarity exists on the shared jurisdiction on forests.

Increasingly, after the Forest Rights Act (FRA), many panchayats and gram shabhas are questioning the legitimacy of decisions by the JFMCs and vice versa, leading to conflicts in many part of India (Springate-Baginski & Blaikie 2013; Laird et al. 2010). In 2011, the Katingkana gram sabha in Odisha state petitioned the District Level Committee formed by FRA to take action against the Forest Department for forming a JFMC in the village (Dash 2012). According to them, the formation of a JFMC by the Forest Department violated the rights and authority vested under FRA to the gram sabha to decide how to manage the forest. In the same year, 2011, the Odisha Forest Department passed a new JFM resolution that prescribes control and management of forestlands by the Forest Department, contradicting the management rights and authorities provided under FRA to the gram sabhas (Dash 2012).

42 A gram sabha is an assembly of adults (above age 18) of a village who are eligible to vote, typically a representation of the whole village.
Panchayats are the political bodies at the local level and are often called the third level of government. In urban areas these consists of the municipalities. The first and second levels are the national level and state level elected officials respectively. Generally, the council of ministers lay down policy and the Civil Services of India enforce them.

5.5.7 Inter-departmental issues
Conflicts between different departments over forests continue in a number of areas and are yet to be addressed. One of the major issues that is being addressed is the treatment of watershed areas. Most watershed areas consist of forest land at the top of the watershed that first needs to be treated for water and soil conservation for the watershed to be sustainable and effective. Funding for watershed treatment has been available from different government departments. However, delays in getting permission from the Forest Department to treat the forest land in a watershed has meant that non-forest downstream areas have been treated first. The lack of upstream treatment can result in severe soil erosion, with repercussions throughout the catchment. This requires inter-departmental cooperation between the Ministry of Soil and Water Conservation, Ministry of Forest and Environment, and Ministry of Agriculture. At the state level, interdisciplin ary committees are formed to coordinate the activities, however each of these ministries have independent programmes and are yet to have mechanisms in place for cooperation in all states.

In the area of governance, the Ministry of Tribal Affairs initiated the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, popularly known as the Forest Rights Act. This law pertains to the rights of forest-dwelling communities to land and resources that have been denied them under the forest laws of India. The Act also seeks to resolve ambiguity by granting secure land tenure, but is very dependent on implementation at the state level (Springate-Baginski & Blaikie 2013) There is much debate in India on the use and misuse of this Act. Inter-departmental cooperation over these overlapping issues across ministries has created a need for a much greater cooperation at different levels of policy making and its operationalisation.
5.6 Summary of results
Communication challenges: Power, lack of mechanisms, inadequate design, unclear processes, lack of long term planning and conflicting visions

Despite changes in recent years, officers in the field are not obliged to report on emerging issues, and often do not take action at the state and national level unless advocated by corporate agents, such as community activists and powerful NGOs from civil society. In general, there is an absence of a power-free mechanism, where individuals are able to register issues and be heard. Mechanisms (e.g. think-tanks) for collecting and sharing information and brainstorming scenarios were absent when JFM was made a policy; this continues to be so even today. Representation of rural and tribal communities is poor and their views are hardly incorporated in forest-related decisions. Mechanisms and institutions that facilitate regular communication between local stakeholders and the Forest Department are limited.

In policy making processes, issues are often contemplated by experts who are generally from the Forest Department or from a similar background. Because of this, analysis of emerging issues from a multi-dimensional and social justice perspective does not take place. There are systemic inter-departmental communication gaps.

Rules and procedures developed to implement JFM are incomplete and without legal backing. In 2010, the Green India Mission was being considered as a tool to give legal backing to JFMC under the Indian Forest Act or the Forest Rights Act (MoEF 2010). However, there have been no changes at the field level as a consequence to this Mission. There are no formal procedures that describe the complete process of JFM and the role of different partners. This leads to ad hoc decisions by the Forest Department and delayed decision-making. Further, there are no clear criteria for monitoring or evaluating results based on the multiple objectives of JFM program and its institutionalisation. Despite the Forest Department having

43 In February this year (2014) the government approved 460,000 million INR for this mission. The details are not yet available.
developed Working Schemes and Microplans, these documents are not adhered to for implementation in all the states.

Since the objective to improve tree cover was a common focus for both the Forest Department and local communities, the initial JFM phase was accomplished without identifying details of long-term mechanisms that would be necessary once the forest had regenerated. It is a moot question if this lack of a long-term strategy was intentional. The proponents of JFM, from activists such as Sunderlal Bahuguna to technocrats such as Ajit Banerjee and Anil Shah, came from the decentralization-democratization school of development theory. The primacy of resource users is acknowledged in this approach to development. It builds on the idea that engaging resource users as resource stewards has comparative advantages over management by centralized public bureaucracies. At the time JFM was initially debated, this seemingly appeared to be the prevailing paradigm among development scholars and practitioners. However this may not be the entire picture.

There was another school of thought, predominantly amongst Forest Department officials, that was centred on the objective of resource conservation. Many senior forest officers believed that JFM makes good sense, not so much for what it does for the community, but for its favourable impact on reducing resource abuse and conflicts. Arguably, both approaches – that is, development and resources conservation – embrace community participation as an essential feature of JFM. However an analysis of the divergent conceptual underpinnings that the two approaches represent is useful when looking for causes for the rather poor performance of JFM in later years. In many instances the Forest Department attempted to dismantle or weaken JFM when communities started asserting management rights over forest that they had regenerated and was ready for harvesting.

In the next chapter, the Communication-Governance model is introduced. The model will help in the analysis of JFM governance, and it’s structural and cultural linkages.
CHAPTER 6: COMMUNICATION – GOVERNANCE MODEL

6.1 Introduction

In this chapter I develop further the theoretical constructs that were introduced in Chapter 1. These theories are incorporated into a model, which can be used as a tool to deconstruct the complexities of communication within a democratic governance system. This is one of my key contributions to research on communication, and fulfils the fourth research objective of developing a communication framework (Chapter 2: Research Methods).

6.2 Communication – governance model

Communication is a necessary attribute of governance and management paradigms that consists of interplay of “structure”, “culture” and “agency”. Margaret Archer (1995) in her book, “Realist Social Theory”, describes the phenomena of structure and agency using “Analytical Dualism”, “Principles of Emergence” and “Morphogenesis”. By using these ontological approaches, Archer emphasizes the need to understand the interplay between structure and agency without conflating them\textsuperscript{44}. According to Archer, this also applies to culture and agency. She introduced the concept of a “Timescale” to explore these interactions.

Archer defines “agents”, “actors” and “persons” (Archer 1996). “Agents” are understood as collectives with similar life chances. “Actors” are understood as individual persons filling their given roles and “persons” are understood as people with a personal and social self. A “person” has energy and the ability to be reflexive and creative. “Agency” refers to the ability of individual persons to act independently and to make their own free choices. While Archer states that there are differences

\textsuperscript{44} Refer to Chapter 1 for additional information. In analytics dualism, Archer suggests that by keeping “structure” and “agency” separate, a better understanding of the interactions between them is possible.
between agents, actors and persons she emphasizes that agents as well as actors are anchored in persons.

Structure is seen as a recurrent organisation and patterned arrangement of human relationships (Barker 2004), which play a role in the kind of choices and opportunities that individuals seem to possess. However, these organisations and patterned arrangements are also constructs and cannot exist without individuals. Archer argues that the study of interplay between structure and agency has been theoretically conflated, thereby masking our understanding of causality between them.

According to Archer, the basic problem in theorizing about structure and agency, is that causal autonomy is denied to one side of the relationship; this prevents us from observing emergent relationships between agents and structure, and similarly culture. Archer argues that this lack of causal autonomy results in either downward conflation, upward conflation or central conflation. Downward conflation takes place when autonomy is denied to agency, with causal efficacy only granted to structure. On the contrary, upward conflation theorists stress on the ability of individual “agents” to construct and reconstruct their world. In this case, autonomy is denied to structure and causal efficacy granted to agency. In central conflation, structure and agency are seen as components that affect each other such that structure is created through agency which simultaneously constrains and enables it. Many modern social theorists prefer this view and see structure as influencing human behavior and humans as capable of changing the social structure they live in.

6.2.1 Agents and structure

While acknowledging the basic relationship between structure and agency (i.e. structures are created by people) Archer argues that unlike the seemingly instantaneous effect on each other, as mentioned in central conflation, they function at different timescales. I use this as the basis for my model which is depicted in Figure 6.1 below.
In this model, one can begin at the stage of “Existing Agents”. The boxes and arrows depict stages and transformation over time, through a number of processes imbedded in communication. The model suggests that “Existing Agents” through their efforts are able to create a “Changed Structure”. This changed structure in turn impacts on the agents and create a situation of “Changed Agents”. The “Changed Agents” then further impact on the “Existing Structure” (which in effect was the “Changed Structure” which was the cause of the change in the agents in the first place) to impact on the “Existing Agents”.

6.2.2 Agents and culture

By applying analytical dualism to both structure and culture, Archer turns cultural processes into a mirror of structural processes. This is depicted in Figure 6.2.

Figure 6.2 shows the transformation from an “Existing Culture” to a “Changed Culture” through changes in agents and the cycle continues. According to Archer material interests play a dominant role in socio-cultural interactions whereby protecting and increasing vested material interest in itself becomes the main role of a socio-cultural agency (Zeuner 1999).
When economic incentives are described as the main driver for socio-cultural interactions, it tends to bestow an undue significance on structure within the structure–culture relationship. Such a view undermines an individual’s capacity to independently create meaning from their life experiences. While material advantage could be one of the drivers, giving centrality to it would undermine the role of personal experiences and a more egalitarian approach to the development of culture. Other theorists, including Popper (Zeuner 2003), suggest the autonomous dynamism of culture in which mental processes mediate the relationship between objective culture and its material foundation. In Archer’s view, thinking is primarily focused on material advantages which are seen as the crucial element for the development of culture. I argue that while material considerations are crucial, the idea of giving them sole primacy as causes for cultural change need modification as it does not agree with some of the oldest and most entrenched philosophical belief systems. For example, although Buddhist and Hindu philosophies acknowledge that material wealth is a commonly sought life goal, it is seen as secondary to dharma, i.e. moral well-being (Trautmann 2012). Without discounting economic considerations, I incorporate the broader cultural view and suggest that a number of fundamental phenomena are at play at the individual level. For example, individuals
find meaning through the act of thinking and engaging in evaluations beyond the economic. In the model presented here, I attempt to integrate this balance, while depicting the interplay of structure with culture. For the analysis of Joint Forest Management, however, I use the underpinning of economic and material advantage groups to study cultural elaboration and include the moral aspect as part of the model.

6.2.3 Agents, structure and culture

Zuener (1999), in her review of Archer, discusses structural, cultural and agency morphogenesis and suggests that such morphogenesis has the characteristics of a cycle that has three phases; structural or cultural conditioning, social or socio-cultural interaction and social or cultural elaboration. In “Culture and Agency”, after independently developing the concept of morphogenesis of structure and culture, Archer explores its merger (Archer 1996). Using the economic underpinning of cultural change, she suggests that material interest groups while vying to further their control on resources, look for ways to legitimize their interests. This struggle by different groups for legitimacy puts them in the situational logic of structure.

While incorporating the idea of cultural change impacting on the structure, a similar subsequent change in structure could impact on existing culture. Further, I suggest that these changes from cultural to structural and vice-versa could be driven by both economic and non-economic interests. I also suggest that in a governance situation a structural change is often a legitimized\textsuperscript{45} change that is waiting to be adopted by the agents. This is because, only when an agent’s behavior is impacted either willingly or otherwise due to the structural change, does the change manifest at the cultural level. This impact of structural change on agents transforms to culture when dominant agents (agents who define the culture, and this could be in terms of majority by number or by influence), internalize them individually and manifest a

\textsuperscript{45} Structural changes in terms of policy, processes, resolutions, rules and so on that have a legal backing and can be enforced by the government.
shared understanding. The core difference as I see it is that structural change is brought in by corporate agents (agents with power to influence) whereas cultural change is at the level of the individual. I depict these transformations in Figure 6.3.

In Figure 6.3, while retaining a mirror image of agents-structure and agents-culture, I have suggested a direct impact of a “Changed Structure” on the “Existing Culture” and similarly a direct impact of the “Changed Culture” on the “Existing Structure” through agents over time.

**Figure 6.3: Agents, structure and culture linkages**

![Diagram of agents, structure, and culture linkages]

Creation of a structure is also a governance function, especially if the body has legitimacy to create institutions, policies and rules. Representatives of the people, in a democracy, create and frame these structures for the benefit of the society (altruistically). While the distinctions between agents, structure and culture helps compartmentalize the process over a period of time, further analysis is necessary to delineate other aspects that affect communication. In the following sections I incorporate the governance model described by Bruno Latour in his book *Politics of Nature* to elaborate the possible path for a structural change (Latour 2004).
6.2.4 Perplexity, consultation, hierarchy and institution

In his book *Politics of Nature*, Latour (2004) lists four stages; perplexity, consultation, hierarchy and institution in arriving at a collective decision based on the merits of a "proposition" (a situation or issue that is under consideration). Throughout each stage, four professions i.e. scientists, politicians, economists and moralists, each with specific "skills" are involved in presenting their viewpoint. Rather than being bogged down by discussions of the merits of each case based on the often irreconcilable stance of facts versus values, the different known facets of the "proposition" are put forth by the four professions at the stage of "perplexity", allowing for a much better understanding of the situation. Based on this better understanding from the "perplexity" stage, a solution to the issue is found in the "consultation" stage, again using the skills of the four "professions". At the stage of "hierarchy" if the solution to the "proposition" does not allow for a proper fit with the existing situation it is sent back for reiteration at a later date. If the solution is compatible and can "fit" the current situation then these are institutionalised with a set of rules, procedures and so on. This forms the fourth stage of "institution". In all these stages the skills of the four professions are availed. The details of Latour’s framework and its various elements are discussed in Chapter 1.

By retaining Latour’s core concepts of four stages, I suggest that these are very much the stages that allow for the agents to deliberate for the creation of a structure in a governance situation. At any point in time in a modern collective, certain social structures are already in place. However, new events or a crisis compel the collective to reflect on the new situation. Corporate agents then, for the benefit of the collective (altruistically), fine tune the existing social structure, to take into account the new situation. Figure 6.4, details how I incorporate the four stages of Latour in the modified agent-structure framework of Archer.
By defining these stages, we are now able to disaggregate and study the kind of communication that occurred (or should occur) in a governance situation. We are also able to see whether or not the process of institutionalizing the decision followed the ideal path suggested by Latour, both in terms of required stages as well as in terms of deliberation by the four professions with their skill sets.

Once the change in the structure is instituted, the impacts of the changes are felt by the agents of the collective in varying levels. In essence the impact modifies the existing way of life of the agents and thus impinges on the existing culture to varying degrees.

6.2.5 Cultural change

Once the decisions are “instituted”, the effect of these “changed structures” are communicated to the collective and the individual in numerous ways. In case of a governance situation, changes in rules and institutions are communicated with an expectation that the collective when following these “structural changes” undertakes alteration in its current practices. However, before it can become a practice, individuals in the collective have to understand what this change means and what is required of them. This is a reflective process and either through thought processes or through direct experience, for example when confronted by regulators, the meaning is subjectively established in the person’s mental framework. This could be further followed by additional assessment of this new situation either as an individual.
or in consultation with others. This assessment leads to the next stage where the individual subjectively decides on the loss or gain occurring from this new situation. A subjective feeling of happiness (pleasure/pain, which is elusive and subject to change) allows the individual to accept the change and modify his/her current practice. A cultural change happens when the modified practices become imbibed by the collective. Agents who are unhappy about these changes can protest, although protest is registered only if sufficient power to influence the structure exists with these particular agents. This may occur if the primary agents organize and become corporate agents and exhibit sufficient influence to be of any consequence (Archer 1995). This also creates a new situation and if elements of crisis emerge, it could lead back to Latour’s first stage of perplexity. The process is shown in Figure 6.5.

**Figure 6.5: Stages in Structure and Culture**

While during the structural change stage, the primary communication is external and between individuals, at the stage of cultural change, the primary communication that leads to change in behavior of the individual is internal to the individual. Nevertheless, in both situations of structural change and cultural change, the internal and external communications, respectively, are present. The difference, as
mentioned earlier, is that in the case of structural change, decisions require the collective efforts (in a democracy) while in case of culture, decisions are with individuals. These stages that lead to change in culture also exhibit characteristics of Latour's four stages of perplexity, consultation, hierarchy and institution. In many ways, it becomes the mirror image of the structural change process. The full model with the Latourien characteristics in the cultural stage is shown in Figure 6.6.

Figure 6.6: Communication-Governance Model

This model focuses on governance aspects and hopes to capture the various stages of decision-making and its impact on those governed through a structure-culture process. Reviewing each of these stages and the processes that were adopted in each stage allows us to examine the gaps and shortcomings in the governance process. At each stage of the process, the communication that happened instructs the degree to which the process was followed, allowing for its evaluation. In many cases while it is difficult and complex to evaluate what happened especially if there are no records to refer to, it at least helps in identifying if these stages happened at all or not. Doing so helps study communication and its effectiveness in its various
aspects i.e. process, source and the contents that were communicated or, as is
often the case, not communicated. While communication at the cultural level is
predominantly internal to the person, areas that can be studied are the external
communications that modify these internal communications causing behavioral
change.

6.2.6 Assessing communication at different stages

From the model we see that structure can have the four Latourian stages of
perplexity, consultation, hierarchy and institution. At each of these stages we try to
assess if different professionals (scientists, moralists, economists, politicians and so
on) were consulted and played a role in reaching a consensus. At the first stage of
perplexity, the model suggests a constraint-free mechanism that allows for various
emerging issues to be heard and recorded without being suppressed or modified.
Archer suggests that in practice impact on the structure is generally possible if the
agents become “corporate” i.e. get organised and have the power to impact the
structure. The model suggests that both corporate and non-corporate agents (i.e.
any concerned citizen) should have access to legitimate mechanisms to raise their
concerns. Is this shift possible? In the current scenario of rapidly changing
technological advances, such instances may not just be possible but could already
be in the early stages of adoption. To illustrate, there are many members of
parliament in India who are now directly accessible through the internet. The new
Prime Minister of India, Narendra Modi who took charge in June 2014 along with his
Cabinet ministers has given importance to the use of internet to connect directly
with the people. There is also a national information technology programme to
digitize the country – thereby substantially increasing access to the Internet. The
central government has started using popular social networking tools such as
Facebook and Twitter and has also initiated interactive websites such as

46 The majority in the country may not have access to the internet as of now but this could be
a beginning. www.internetlivestats.com reports 243 million internet users in India in 2014 i.e. about
20% of the population of India.
www.mygov.in (PMO 2014; FP 2014). The difficulty lies in developing mechanisms and institutionalising them so that they are open and transparent with access to all. The challenge is to systematically engage the citizen, monitor their comments, many of which would be “propositions”, sort these without bias and institute mechanisms to scrutinize, compile, prioritize and debate these comments by professionals with skills to assess the emerging issues from various perspectives. Current TV chat rooms supposedly aim to give the audience an informed understanding of an emerging issue through discussions among various experts. Streamlining such processes and considering the various dimensions (say scientific, moral, economic, and political) with help from professionals, leads to a better understanding of the issues at hand.

Identifying professionals from scientific, moral, economic and political arenas is relatively easy if they have credentials already conferred to them. A person whose “profession” is a scientist is seen as anyone with the credentials from mainstream accredited or accepted scientific institutions. A person with moral credential could be individuals who have undergone religious studies from mainstream institutions. The case for economists and politicians is similar. As discussed in Chapter 1 this wording of “profession” however could cause “epistemic injustice” if not sensitively defined. A tribal person with a deep knowledge of the forest will not be seen as a scientist by the mainstream. As discussed in previous chapters, the skills of local communities (specifically resource users) and their understanding of natural phenomena is necessary for a better understanding and decision-making on what may or may not work locally. For this reason I chose to use the neutral term “skillholders” to designate a person with skills. In this situation, the person may have certain skills intrinsic to the context they are in, and are locally recognised for their skills, even if they do not have credentials from accredited institutions for e.g. a hunter, a medicine man, spiritual leader, a trader, a traditional leader etc. Such individuals with skills that are recognised and exist in communities can be termed as “civil-experts”. This can be in marked contrast to “conventional-experts” who come from the mainstream with accredited qualifications. By making this distinction it now becomes necessary that for each “profession”, the views of both the “civil-experts” and the “conventional-
“experts” are heard. So in the case of a scientist, a person (or persons) who has been recognised as a scientist in the field of “conventional science” along with a person (or persons) from “civil science” both contribute in the deliberation of the issue at hand.

The main question then is to see if there has been adequate inquiry and deliberation by various skillholders as we move across the stages. These deliberations have to be recorded at each stage and the outcome communicated to the next stage of the process for it to reach the final stages of policy making. This not only requires existence of mechanisms that allow such deliberations to happen but also the capacity to record and reflect upon them as the process goes from one stage to the other (i.e. from perplexity to institution). In practice, policy-making debars community and commoners from its process with inbuilt mechanisms that promote authority, expertise and order (Colebatch 2002). Possession of legitimate authority is seen as a necessary condition, and policy-making is often described as the work of official authorities. It is seen as a way to solve problems and this constitutes another basis for participation: having expertise that is relevant to the problem. Expertise becomes an important way of organizing policy (Colebatch 2002). But this expertise is of the accredited variety and rarely from the local communities’ perspective. However, there are instances that include stake-holder participation in policy-making as a means to get the views of a diverse section of the community. My model proposes to solicit views specifically from relevant skillholders, along with views from stakeholders, so that the skills of the individual or groups help in better understanding of the issue at hand, to arrive at solutions.

Policy is also concerned with making organized activity stable and predictable (Colebatch 2002). Much of policy-making is governed by a hierarchical structure such that many of those from the community who have legitimate, relevant interests may not have a place in the policy-making process, and many of those who do find a place may not have an equal say in the deliberations. Therefore, a critical question that we are trying to address is how people with little standing in the world of official authority can challenge the existing order and participate in policy-making. This
model suggests a more open process which, despite being relatively more time consuming and subject to many iterations, will have the robustness to systematically engage on issues that “knock at the door of the collective”. The advantage of this however, is the potential strengthening of governance, as the current abstract, yet very effective, barrier between the governed and the governors breaks away, leading to an increasing number of citizens starting to be a part of the discourse. Figure 6.7 adapted from Table 1.4 of Chapter 1 depicts some of the skill sets (not exhaustive) and the possible differences in approach of the Governments and the indigenous (or tribal) community, that will bring in their respective skill sets at each of the stages.

**Figure 6.7: Skill sets and possible differences in approach of Government and indigenous (or tribal) community**

![Diagram showing skill sets and possible differences in approach of Government and indigenous (or tribal) community.](image)
6.2.7 Assessing the levels of structure

Within the broad label of structure, there are many different levels of sub-structure, each exerting and influencing the choices and opportunities which individuals possess, through increasingly specific rules and regulation, as we proceed from the national level to the community level (Figure 6.8). As countries become more networked, we also have the supra-national structures (not depicted in the Figure). In networks such as the European Union, the supra-national structure plays a prominent role in shaping the national level policies of individual nation states. In forestry for example, the Montreal Process Working Group on Criteria and Indicators (a supra-national body) has the potential to impact both national and local level decisions (Chandran & Innes 2014). In India, and in the context of JFM, the national level Ministry of Environment and Forest plays a prominent role in setting policies. These are then adopted within the broad policy framework in manners that suit the situation at the state level. The rules and policies that are framed at the state level are implemented by the field executives of the Forest Department.
In practice, the Divisional Level of the Forest Department exerts a tremendous influence on how the policy is interpreted and implemented. Interestingly however, the level of Conservator of Forests also has discretionary powers that allow for modifications in the existing practices. These levels are not depicted in Figure 6.8 as in essence the policy formulation primarily happens at the state level whereas the Forest Department field cadres (from Conservator downwards) are involved in implementing it.

6.2.8 Assessing the impact of structure on culture

At the level of community, the structure can consist of a legal institution based on rules, resolutions and other enabling and constraining factors or a traditional one
with customary rights, norms and practices\textsuperscript{47}. Often both exist side by side with an overlap in function. Initially it is the traditional institutions that usually begin the process of regulation of forests within the JFM framework. The legalization of the institution happens if they get registered as an entity under the Indian Societies Registration Act 1860 or under the State Cooperative Acts. With the advent of the Forest Development Agencies (FDA), it has become a practice to register FDAs (which is a network of JFMCs), rather than individual JFMCs.

The change in structure also impacts the culture of the Forest Department and individuals in the department. The study of the extent of cultural change in the communities and Forest Department reveals the impact of communication in JFM as well as the overall resilience of the program.

While structure exists at different levels, its effect is finally visible most notably at the level of individual. All these different levels both constrain and enable individuals in their actions. Over a period of time, these forces impact the individual’s behavior, beliefs, customs and norms. As individuals change due to these forces, they modify the existing collective culture. As Archer emphasizes, agents (Forest Department, community) as well as actors (Beat Guards, JFMC President etc.) are anchored in persons and changes in the person in turn impacts the other dimensions.

\textbf{6.2.9 Steps for using the model for assessing the communication scenario}

Before assessing the governance and communication scenarios, it is useful to decide on the structural level to be assessed. Thus by disaggregating the levels, as well as the stages, we are able to look at these sub-segments one at a time. Importantly, we are also able to see the kind of information flow that happened. The

\textsuperscript{47} Many households also possess exclusive customary or traditional rights on many of the forest resources, specifically produce from certain trees. The use and management of the resource is done by the individual family. The community upholds these rights.
suggested steps for using the communication-governance model (for any policy-implementation process) to study the communication scenario would be:

1. Identify the various levels of structure

2. Select the level that is to be studied

3. Identify the dimensions of the situation that are important (scientific, economic, moral, political and so on)

4. Assess the mechanism (existing at the initial stage of perplexity) for a citizen to register an issue and be taken up by the government for scrutiny.

5. Assess if individuals or groups with essential skill sets (based on the identified dimensions in the previous step) have been involved at each stage.

6. Assess if these individuals have skill sets that are accredited and/or community endorsed (conventional experts and civil experts). Assess the mechanisms that exist for incorporating views from different skill sets.

7. Assess if the four distinct stages have been followed. Identify the communication that happened and the mechanisms that were used in each of the four stages.

8. Assess mechanisms existing for information flow to community after institutionalization. Identify these mechanisms and the information communicated.

9. Assess mechanisms for enabling understanding of the loss and benefit of the changes.

10. Assess mechanisms that exist for individuals who have issues with the proposed/imminent change so it can be expressed and recorded for the next iteration

11. Assess mechanisms that monitor the changed situation (cultural change) and record it for the next iteration if necessary.
12. At each stage assess the communication that happened and the actors involved.

6.2.10 Advantages and limitation of the communication-governance model

Advantages:

1. The model is able to give a delineated view of governance issues and their impacts. The stages help in selectively looking at various communication situations at different points of time and in analysing the drawbacks.

2. The model is able to identify areas that require improvement in skill, sensitization, training and attitudinal change.

3. The model is both a guide and an evaluation tool.

4. It suggests ways to eliminate epistemic injustice.

5. It gives a better understanding of issues by involvement of “skillholders” that consists of “conventional experts” as well as “civil experts” and goes beyond just stakeholders.

6. The cyclic links between structure-agent-culture suggests the possible strong impact of legislations on culture and hence the need for careful consideration of policies before its institutionalisation.

7. The model can work in macro as well as micro settings. It is also culturally sensitive.

Limitations:

1. The model tries to simplify complex phenomena of communication and governance, hence care is required to be flexible so as not to simplify the
phenomenon and rigidly follow it, but to be aware of its complexity and to allow for modification.

2. The model needs to be communicated in simple language for its use in practice.

3. The model needs field level application to understand the difficulties in defining the dimensions and the specific skillholders required for those dimensions.

The Communication-Governance Model, along with results from the previous chapters is used to analyse the communication situation in JFM in the next chapter. I use this model to consolidate the results of communication challenges and mechanisms from various earlier chapters and demonstrate the application of the model.
CHAPTER 7: ANALYSIS AND DISCUSSION

7.1 Introduction

The objective of this research was to study communication in Joint Forest Management (JFM) in India. The previous chapters on “Village Community”, “Forest Department” and “Evolution of JFM” highlight the complex array of communication challenges faced, and mechanisms used, by communities and the Indian Forest Department.

In this chapter I initially analyse the results presented in previous chapters. I then analyse the results using the Communication-Governance model and incorporate the findings with literature review. At the conclusion of this chapter, I elaborate on and address three of the four research objectives described in chapter 2, namely:

- To understand the communication challenges in Joint Forest Management and how to overcome them;
- To identify existing and possible local communication mechanisms,
- To assess the perceived effectiveness of different communication mechanisms

The fourth research objective to create a framework has been addressed in the previous chapter and is used here to inform the above three objectives.

7.2 Part 1: Analysis of results

7.2.1 Communication challenges

Communication in JFM was perceived as an important challenge by the Forest Department. At the village level, communication between the Forest Department and community was perceived as sporadic. While Forest Department respondents agreed that communication was insufficient and was an acute barrier to effective
JFM, the community survey results were mixed. Community respondents felt that they communicated with the Forest Department (only 2.5% of community respondents mention complete absence of communication). Detailed analysis of the village survey suggests that communication on a sporadic basis occurred between members of the community and field staff of the Forest Department when employed in forest labour activities. Additionally, they encountered each other while in the forest to cut firewood or graze cattle. The other occasion when communication took place was when Forest Department personnel were attending village level meetings. These meetings however were infrequent, and the JFMC works took place under unclear administrative, legal and financial constraints. Communication appeared to be often one-sided with information transmitted by the Department verbally during meetings or during one-on-one meeting with few community leaders.

While information about schemes and programmes are conveyed to the community, primary intention was to recruit community members as labourers. The JFMC was not seen as an independent entity by the Forest Department with resources of its own, able to make independent decisions for the community. On the contrary, institutions and processes undermined the strengths of JFMC. For example, the Forest Development Agencies (FDA) grouped several JFMCs together and disbursed funds for forest activities. The JFMC and the community in most cases are hardly aware of FDA proposals and the intricacies of obtaining funding. Once funding is received the Forest Department manages the funds on behalf of the JFMC. The formal communications required to make the JFMC resilient and accountable, therefore, are not in place. Further since JFMC status continues to be dependent on the satisfaction of the Forest Department, the JFMC cannot make independent decisions on forest-related management except for a few token activities, which prevents it from becoming a viable financial institution. Linkages with other institutions which could play a supportive role for the JFMC, such as with panchayats are not established and are unclear. Communication between the JFMC and such institutions tends to happen haphazardly, rather than by design. An example of this is when a person is member of both JFMC and the panchayat.
The communities depend on the Forest Department for forest-related information. Although a number of forestry related sources of information were identified by the communities, JFMC meetings and traditional village meetings were listed as primary sources. Independent and reliable sources were not available or easily accessible, such as vernacular newsletters. Communication with government functionaries other than the Forest Department and institutions like local NGOs was weak and was not a significant source of forest-related information.

My experience of working on Joint Forest Management for more than 15 years, data from the village survey, IFS survey from across India, and secondary data indicates that Forest Department personnel across different states did not attempt to improve the health of JFMCs or to monitor the JFMCs on core areas. The Forest Department irregularly monitored JFMCs and did not maintain records of meetings, discussions, elections and forest-related activities. Few people with decision-making authority in the JFMC, such as the President and Secretary, hold the information they get from the Forest Department. The committee members in the JFMC are volunteers and finances available to the JFMC are limited; hence most activities occur on an ad hoc basis rather than being planned\(^48\). This haphazard working approach prevents regular and systematic communication among the committee members, as well as with the communities.

Within the Forest Department, there is an absence of any long-term communication strategy at state and national levels for regular information flow with JFMCs. In the survey, some senior Forest Department officers identified the need to have a comprehensive look at the kind of communication required and the identity of stakeholders to communicate with, within the community and outside. Officers also suggested ways to identify good communicators from the Forest Department,

\(^{48}\) Most funds for JFM come from government and donor agencies, but are available for short periods and are activity based. While individuals who work as labour get money for the work done, no funds remain with the JFMC resulting in collapse of the JFMC. While there are small-scale examples to overcome this issue, it has not succeeded across India (Balooni & Inoue 2009).
community or NGO. Currently, all field-level forest staff communicates with the village communities but field staffs have no protocols for communications with their constituent communities. A senior Forest Department officer also identified inadequate staff training as a problem, identifying the need for improving skills that support them to interact constructively with members of the public and to communicate effectively. The dual roles of community development organiser and enforcement officer compromised each other. There was also a gender imbalance as most field staff was male.

7.2.1.1 Communication and power

The Forest Department has absolute authority and final say in most matters of decision-making related to forest management. The Forest Department continues to take most decisions on forest management. JFM could have helped in genuine transfer of decision power from the Forest Department to the communities. However, the Forest Department has been restrictive and continues to hold powers to take decisions on most management decisions as there are no binding laws that call for such transfer. Furthermore, it suits the Forest Department administratively to have control on these decisions. This was because the perceived objective of JFM by most Forest Department officers was not decentralized decision-making by primary users, but rather co-opting communities to regenerate forests. Enabling legal and constitutional mechanisms, such as registering a cooperative society or awarding title and tenure under the Forest Rights Act, have yet to be implemented fully. Lack of organisational accountability and transparent election of JFMC members, bypassing elections and failure to hold regular meetings have all undermined the JFMC’s effectiveness as an institution in the study villages.

There has also been no transfer of fiscal responsibility to the communities. Most of the budgeting and payment of wages for forestry work in JFM areas is carried out by Forest Department officers. The communities are not in a position to compel the Forest Department to make any changes to these practices due to lack of organisational capacity and financial strength to engage with the Forest Department. Despite the fact that NGOs and activists have also lobbied for more than 10 years
for changes to such practices, progress has been very marginal. Most decisions on forest management continue to be taken by the Forest Department and the role of community is generally limited to supplying the labour. Hence, this unequal relationship of employer – employee is reflected in the attitude and behavior of the Forest Department and rudeness in communication with communities. Despite tremendous changes, the communities continue to fear the Forest Department and would prefer to keep away. While both the communities and the Forest Department agree that improving trust and relationship is important, adequate training and skill development is lacking at the field level. This issue was also identified to exist with IFS recruits as their curriculum did not adequately reflect such attitude and behavior change needs.

7.2.1.2 Organisational versus individual communication and competence

At the implementation level a number of communication lacunae exist both with the Forest Department and in the JFMC functioning. Lack of systems, entrenched channels and behavior, lack of expectations and lack of transparency are some of the reasons given by the Forest Department.

Within the communities, the main source of forest-related information comes from community leaders. The leaders have meetings with the Forest Department either individually or at the village meetings. Since most of the communication is oral and very few records are maintained, information dissemination is primarily via word of mouth to other community members. This in turn has implications internally within the community and depends on who is privileged to have information or not and is further based on the groups and networks with privileges and power. As evidenced in the research villages, a lack of regular village meetings, therefore, contributed to a systemic information bottleneck between the JFMC and community members. Since very few individuals from the research villages were seen to interact directly with Forest Department staff for needs such as wood, but prefer to go through leaders of the JFMC, these leaders have a good grasp over information flows between the village and the Forest Department.
Within the Forest Department, instructions and information about programmes are conveyed by the senior forest officers to the junior officers. Key information is printed and distributed to junior officers, but predominantly information is conveyed orally during meetings and trainings. For monitoring purposes, written information is also sought by senior officers and these are compiled by the field officers based on records kept by them. The JFMC or the community is generally not privy to these records. There has been an effort to computerize this information at the Range Forest Office and reduce writing them by hand. In general, junior officers only convey information that is requested by senior officers, rarely would they provide additional information beyond what is required by their superiors. Information about the functioning of the JFMC and emergent issues from the field are not recorded, since no systematic monitoring is in place for JFMC meetings and activities, other than quantitative plantation-based targets.

7.2.1.3 Communicators in JFM

According to my village survey, JFM leaders such as the President and the Secretary were mentioned as the main communicators. In a few instances, traditional leaders were also mentioned. The survey also suggests that among Forest Department officers, the Beat Guard was the main contact for villagers with the Forester playing the second most important role in communication. This was in agreement with the Forest Department survey as well where Beat Guard and Forester were seen as key positions in the Forest Department hierarchy that interacts most with the village.

Leadership status and qualities was a prerequisite for communicators from the communities. Since communicators were either the President or Secretary of the JFMC, the role of communicator comes with the position. In the Forest Department while all officers assume the need to directly communicate with the community, the default personnel is the Beat Guard. Information about programmes however was seen to lie more with the Forester than with the Beat Guard. While attitude, local language skill, sensitivity to local culture and personalities were mentioned as important skills for an officer posted in areas having JFM, these criteria were not
followed when posting officers. This was mentioned as the prevailing situation for any departmental posting. Training and in-service orientation of Forest Department field staff was seen by the senior forest officers to produce better communicators and encourage improved communication with JFMC and other villagers.

The ability to build relationships was seen as important both by the communities and the Forest Department. The Forest Department survey and community survey indicated that better relationships lead to better communication. In essence both relationship quality and communication go hand in hand. The Forest Department also mentioned trust building: Officers need to change the officious attitudes, spend more time with community to learn from them, listen more and address community concerns first, rather than impose the Department’s views. However, very few forest officers are seen to have the skills to follow such practices.

7.2.2 Communication mechanisms
As mentioned previously, village meetings constitute the main mechanism used for communication by the Forest Department. There are also sporadic one-on-one meetings with leaders in the village or at the office. Occasions such as Forest Development Agency meetings or Divisional Level Working Group meetings allow for meetings with senior officers.

Since village level meetings minutes are rarely recorded, there is a dearth of written information about these meetings. Particularly, discussions of emerging issues faced by the community are lost. This also represents a failure to meet expectations of societies to keep record of meetings and document at least one General Body Meeting in a year. Some meetings that conclude with ‘formal’ agreements may be written up and signed by members who had attended the meeting: however, these instances are rare. The community survey suggests that oral methods of “face-to-face”, “go with a group”, “leader speak for you” continue to be seen by the community as the most effective mechanisms for getting things done.
7.2.2.1 Traditional versus technology

Traditional village meetings (*ujjamani*) were seen as one of the most popular traditional method for communication. In the initial years during JMF formation in the study villages, the Forest Department used this mechanism to good effect. Since participation of at least one member from each family was mandatory in such meetings, the information reached all households directly. In later years, village meetings have become prominent and the Forest Department personnel now rarely attend traditional village meetings. In the village meetings, attendance is not a major criterion and therefore individuals skip these meetings.

There have also been changes in attendance at traditional village meetings. With conversion to Christianity many households no longer attend these meetings. Strong religious factions, while affecting the traditional village meetings, also impinge on the normal JFMC meetings.

On the use of technology, the Forest Department was divided. While senior Forest Department officers concede that in the future it may become very important, they questioned the need to use methods such as the internet and mobile phones for communication when the community has not yet reached that state of technological competency. Many forest department officers also expressed difficulty in accessing these technologies in remote areas due to lack of infrastructure development; the community survey also reflects this concern. Community respondents tended to prefer more direct oral communication; however, limited radio, television, mobile/cellular phone, internet and email use may indicate that these means are no longer novelties that exist only in the urban areas. The national government that took over in May 2014 has embarked on a massive development agenda, and it is probable that technology will become one of the very important communication media in governance at least for the current national government. Already, use of social media and internet has been brought into use and popularised during the run up to the elections and then later by the Prime Minister’s Office: for example, the Prime Ministerial candidate used 3D technology to speak to multiple remote villages in real time during elections. After elections a website www.myGov.in has been
created for interacting with citizens on a number of topics. These are early stages and may take some time to evolve, however anticipating and preparing accordingly for the change by the Forest Department may be prudent.

7.2.2.2 Institutional and social networks
Institutions and social networks have played a crucial role in shaping and developing JFM since its inception. Nonetheless, these institutions do not operate synergistically and often work in isolation. New policies and rules continue to be framed without consideration for systematic relationships among existing institutions, such as between the JFMC and the Panchayati Raj Institution or Watershed Programme. No mechanisms exist to anticipate possible issues and beneficial liaisons. Communication with Universities and Institutes that are involved with forest-related research continue to be minimal, and disconnected from emerging issues in the field. National level networks have been unable to affect change in the current scenario, with limited success in engaging government for improved practices. State level mechanisms such as the JFM Cell, while effective during the project period, has become redundant due to lack of proper institutionalisation. While sporadic efforts by the Forest Department and NGOs exist to improve functioning of JFM at the state and national level, these have yet to produce definitive results for the community, specifically related to sharing of timber from JFM forests.

7.3 Part 2: Using the communication-governance model
In this section I apply the Communication Governance Model to understand the situation in Joint Forest Management in India and in the state of Gujarat. As a first step, I identify different levels in the structure that are key sub-structure levels for JFM. We will look at the situation at three levels; national, state and community as it is at these levels that policy, procedures, rules, regulations and resolutions are adopted. Further, we will also look at four dimensions: science, economic, political and moral across the four stages of “perplexity”, “consultations”, “hierarchy” and “institution” as suggested in the model. The model was conceived after the data collection was completed and has emerged from the data collected and analyzed.
Consequently, there are possible data gaps at the structural and the cultural aspects that will need to be examined in another study.

7.3.1 Analysis of communication at national level

At the national level, the pre-JFM situation of “perplexity” starts with the beginning of state control of the forest. This continued after independence in 1947. As depicted in the chapter on evolution, there were many local initiatives across India that highlighted the need for community involvement in forest protection and use. While these initiatives provided models for framing policy (or orders or programs), there was no clear evidence of any systematic study or deliberation on the four dimensions – science, economics, politics and morality. There also seemed to be a complete lack of any systematic discussion among “skillholders” as defined in Chapter 6 on the Communication-Governance Model. We also see that there was no mechanism for individuals at the community level to connect with policy makers, to inform the policy makers about emerging issues and to advocate for changes. There is, however, evidence that many individuals in their capacity as bureaucrats or leaders of civil society organisations were involved in networking and discussions. For example⁴⁹, Ajit Bannerjee from West Bengal met with AKRSPi officers in Gujarat who were involved with JFM development. Similarly individuals such as Madhu Sarin, who was studying the initiative in Sukhomajri (Haryana), were networked with NGOs in Gujarat and other parts of India.

As discussed in the Chapter 5 on evolution, it is clear that the JFM Guidelines of 1990 did not have a precedent of stakeholder discussions, much less systematic government-facilitated discussions with “skillholders”. From a communication standpoint, there were no institutionalised mechanisms for the flow of information from the community to the Forest Department. There are also no known records of any systematic inter/intra-departmental discussions within the government, such as between the state Forest Departments and the Ministry of Environment and Forests.

⁴⁹ Personal communication with Shashidharan, ex-AKRSPi Program Executive.
at the national level. Individuals who shaped the discussions at the government level were people with power (i.e. position and knowledge), and had access to senior bureaucrats at state and national levels.

After the JFM guidelines of 1990 were framed, these were sent to the states for follow up with state-level resolutions. There was no direct impact of the national level guidelines on the village communities or the Forest Departments until the individual states came up with their resolutions. Forests in India are both a state as well as a national responsibility, with the states assuming this responsibility. Apart from the senior Forest Department officers and a few NGOs, most village community and local level Forest Department officers had no knowledge about the changes that were being designed at the national level. In 1990, the information flow was also restricted, as no internet was available, and existing print and electronic media had limited impact in rural areas due to lack of infrastructural capacity. This is unlike current policy initiatives, which have become available to a far larger number of individuals and organisations in a shorter span of time with the assistance of dissemination technologies.

7.3.2 Analysis of communication at state level

In Gujarat, there were discussions about community participation in the protection and management of forests prior to 1990. In part due to the initiatives of NGOs, and partly due to Forest Department initiatives (Chapter 5), linkages between the Forest Department, communities and NGOs were growing. Gujarat had also instituted a State Level Working Group at the Principal Chief Conservator of Forests level to discuss various issues connected to forest management. The Working Group consisted of senior Forest Department officers, NGO representatives working on rural development, and a few academics. Consequently, resolutions taken by the Joint Forest Management task force for Gujarat had inputs from NGOs and academics as well. Nonetheless, no direct community level discussions took place, nor were community leaders from the villages party to the deliberations.
As seen from the initial resolution, there are many aspects of administrative and procedural issues left unresolved. Discussions did not focus on various dimensions of science, economics, political and morality aspects of JFM. Much effort was given to defining the village institutions, their responsibilities and benefit-sharing arrangements. The responsibilities of the Forest Department were not spelled out. The JFMCs that were created did not have the legal status of an institution, their role vis-a-vis other existing institutions were not defined, the rights of tenure not clarified, the process of JFM in its totality such as a process chart to guide the community and the Forest Department never developed, the cost of protection incurred by the community was not accounted for, and the role of traditional community practices and their relation to forests not considered. Again, as with the case of national level policy guidelines and orders, the state level resolution was achieved with minimal external consultation. Interdepartmental or local level linkages, with panchayats for example, for this policy were also not resolved.

Information about the resolution was communicated from the Forest Department to the community level through local Forest Department staff and NGOs. There was no mechanism that allowed direct or open communication for community members to get information. Depending on the initiatives of individual officers of the Forest Department and the NGOs, the information reached the communities. The resolution was interpreted by individual officers according to their understanding and conveyed to the community. The process for the application of JFM was neither clear nor standardized by the Forest Department. The forest areas under protection under JFM chosen were ad hoc and not based on any long term “village Microplan”, or “Working Scheme” as it was later called. There was confusion among the Forest Department officers regarding the validity of plans that were prepared by the community vis-à-vis the Working Plan of the Forest Department. There was also confusion between the Forest Department and the communities regarding the allocation of forest areas. Many villages insisted that forests within their village revenue boundary was theirs to protect, whereas the Forest Department wanted to decide based on “Coup”s and “Compartments” – areas demarcated in the Working
Plan for management of forests (and not in common knowledge of community members).

No systematic mechanism existed for recording or conveying operational issues back to the state level for policy modification. In some instances issues that emerged during implementation were recorded, but only as anecdotes from senior officers’ field visits, or notes from NGO officials. Systematic recording of these issues by the Gujarat government began with the introduction of a state level JFM Cell in 1998 and the Divisional Level Working Group (DLWG) in 2000. Issues documented at DLWG meetings were discussed at the State Level Working Group and many policy changes were initiated to improve JFM. Many prominent community members were invited to divisional level and state level deliberations on JFM. Any community presence at SLWG meetings was as an invited guest and was not as part of any long term plan. With the implementation of Forest Development Agencies (FDAs), a group of village institutions (~ 50) were registered in which the Chairperson was the Conservator and the CEO was the Divisional Forest Officer. This structure has been legitimated, but is within the control of the Forest Department. A representative of the JFMC attends the FDA meeting. In the survey and group discussions from my village research, no participants mentioned attending FDA meetings.

An initiative called SAKSHAM by VIKSAT, an NGO working on Joint Forest Management in the North-Western part of Gujarat, tried to address the issue of absence of community input at the SLWG, by creating a federation of JFM institutions. The idea was to continuously monitor and record local issues in different parts of the state through JFMCs, and bring these to the State Level Working Group for consideration. While efforts were made to have a community member represent SAKSHAM at the SLWG, it did not succeed.

7.3.3 Analysis of communication at community level

Before the advent of the JFM programme, legal access and control of forest resources by the communities was minimal. Forests were logged by contractors
according to the Forest Department’s Working Plans. In many places, clear-cuts were advocated, creating sudden loss of forest resources for the community living near the forest. Due to the heavy dependence on the forest and forest products for livelihood, there was continued use of forest resources, especially in areas of high forest. Encroachment on forest areas for farming was also a common occurrence. Villages with degraded forest areas had difficulty collecting sufficient resources for livelihood needs. The staff from the Forest Department policed the forest and was feared by the community. The Forest Department officers could physically stop, detain or place under arrest, individuals caught for any forest offence. Survey results from community participants suggest that livelihood activities such as collecting firewood, grazing cattle in forest, cutting wood for house construction, collecting mud or stones for building maintenance, and even getting herbs for medicine was prohibited. The villagers had no communication mechanism or systematic avenue to redress these issues. The community survey indicated that community members feared and avoided Forest Department staff. When the situation became desperate, as in many of the villages adjoining the research villages, there were conflicts with the Forest Department, including assaults on its personnel (Pathan et al. 1991).

After the Forest Department introduced the concept of JFM in one of the research villages, the elders of the village decided through village meetings, to form a JFMC. One of the study villages was a pioneer in JFM (in 1991), whereas the other two research villages started JFM at a later stage (in 2007). Whereas 74% of the respondents in the first village knew that JFM was being adopted in their village, in the other two villages more than 90% of the villagers had knowledge about the initiative in their village. While knowledge of the program existed, the provisions and process to be adopted were neither clear to the village community nor systematically followed by the Forest Department. In most instances there were no written

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50 Discussion with village leaders in Makanjhar, Balethi, Mota Jambuda and many other villages in the region (1996).
procedures even within the Forest Department, which led to many ad hoc decisions by government officers.

At the community level, the JFM governance institution is the JFMC. The State resolutions describe the structure of the JFMC and its functions. All correspondence during the initiation stage of JFM formation in the research villages with the Forest Department was oral and all the processes and benefits were explained orally. A one page village resolution, signed by the community and given to the Forest Department, was the only formal document that initiated the process of JFM. No other written agreements were made with the community by the Forest Department during the initial period due to the lack of clear procedures. Even after 20 years of JFM, there is minimal level of written correspondence. Lack of written records unfortunately also creates opportunities for commitments to be flouted. The records in the research villages did not give a clear picture of the JFM forest area and its boundaries. During the initial establishment of JFM in a village, even though many meetings were conducted in the villages by the Forest Department, discussions were very restricted. Neither the Forest Department nor the village communities involved had any systematic discussions on the implication of JFM in a village based on the four dimensions (i.e. scientific, economic, moral, and political). Economic aspects of JFM, such as returns from grass harvest, potential employment, increased firewood access and eventual sharing of timber were mentioned by Forest Department representatives and NGOs while having meetings to recruit the community. The financial aspects of protection were rarely discussed by the Forest Department and NGOs. Maximizing benefits and making a profit were seen as taboo by the implementing agencies and the focus has been on the support for subsistence livelihoods. The Forest Department has focused on getting the forest to grow back and the NGOs have focused on issues of social justice, such as participation, equity and gender. Economic and financial aspects of the resources are barely referred to in the preparation of Microplans.

The rules framed by the JFMCs were primarily related to the protection of forests: for example, having volunteer protection groups, fines that were to be levied if a
member did not join the protection squad, or fines to be collected if someone was caught cutting trees. Most forestry activities were directly managed by the Forest Department. No managerial or financial transactions were conducted by the JFMC. In many cases it was likely that the Forester would be the Secretary of the JFMC acting on behalf of the JFMC. There were instances of complaints when the Forest Department recruited labourers for forest work from neighbouring villages, without informing the JFMC on which the forest work was being carried out. Rules that were framed by the community were often ad hoc and patchy and unsustainable over a period of time. The JFMC did not have any jurisdiction to make rules related to harvesting of timber or other silvicultural activities, such as thinning for improving tree growth/yield, or cutting deadwood and other branches from trees used by villages as firewood for cooking purposes. All these activities continued to be decided by the Forest Department, and there have been no clear guidelines or timelines for implementation prepared by it. Written communications for these activities were rare, and permissions and its implementation are completely dependent on the Forest Department. JFMC rarely gave written requests to the Forest Department for permission for such activities. The area that the JFMC provided clear rules was in the collection and distribution of grass from the forest.

For tribal communities to impact forest policies, the communities needed to have leverage in dealings with government officials (Trosper 2007). While local NGOs such as AKRSPi and VIKSAT helped in creating a federation of JFMCs that culminated in a state federation called SAKSHAM, these were not supported by the Forest Department.

Rules that were framed by the Executive Committee of the JFMC were informed through village meetings. Enforcement of the rules depended on a number of factors. Having Forest Department representatives attend meetings and

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51 This was mentioned during a field work meeting in 1996. I spoke to the workers who were planting in the forest area with the watchman who was overseeing the work. There was a similar instance in neighbouring the village of Gamtalav in 2010 which led to fights between the workers from other villages and people from Gamtalav village.
communicate regularly with the committee reinforced the authority of the JFMC. If there was a perceived lack of support by the Forest Department, the authority of the JFMC over the community weakened\textsuperscript{52}. This could be because of the near lack of legitimacy of the committee on its own.

Currently, there is no mechanism to monitor the issues that arise in a village and systematically record these. The village meeting is the main forum where individuals can raise issues. However, the lack of regular meetings and documentation through minutes hampers any systematic monitoring.

7.3.4 Cultural change in forestry

In order to study the impact of JFM on the culture of communities and the culture of the Forest Department, a good knowledge of prior and post-JFM cultural practices is required. While some of the impacts are visible and clearly identifiable, others occurred because of external factors such as access to employment and the results of development. Some of the key changes in the cultural and traditional practices of local communities that can be attributed to JFM are described below.

JFM introduced the idea of voluntary protection of the forest. The JFMC allocated protection duties to each household turn by turn. Sometimes a few households would be allocated a certain section of the forest as a group to be monitored for a day. There were variations in practice which included having women protection groups, protection at night and recruitment of a watchman who was paid by the members either in cash or kind. Fines were imposed if a household could not contribute to the voluntary protection. The practice of voluntary protection continued for many years, which altered the way the community traditionally used and accessed forest. The immediate effect was on women: they travelled further away from villages to collect wood, from forests that did not enforce JFMC protection. In

\textsuperscript{52} This was mentioned to me by an elder, who was a JFMC Executive Committee member of one of my research villages.
Makanjhar village, women also took on the role of protection. They had all-women protection squads who would patrol the forests during the day time. Collection of firewood without cutting down or destroying the trees became a point of discussion and contention within the community. Alternate ways for collecting firewood, increasingly became the norm, including increased use of residues from crops harvested and collecting firewood from outside forests.

The continuation of these protection groups depended substantially on the leadership and efforts of the JFMC. When the Executive Committee composition changed, or if there were latent conflicts as with Kevdi and Jetpur, the protection group did not function on a regular basis. Individual families who did not participate in the protection were required to pay a fine to the Executive Committee, or arrange for another person to go with the protection group. This shifted to hiring a watchman to keep a watch over the forest, paid from community contributions. These were new practices that the community adopted. As forests matured, the new challenge faced by the community was illegal cutting by organised groups of miscreants. While earlier it was the job of the Forest Department to stop the community and outsiders from damaging the forest, this responsibility was partly transferred to the local community once JFM was initiated in the village.

The JFM Guidelines in 1990 allowed for JFM in degraded forest areas. There were many instances following this guideline when communities started protecting their degraded JFM forests but also started using the high forest in neighbouring areas. The guidelines created a situation which incentivized degradation, as when high forest was degraded then it could come under the purview of JFM and community management. In 2005 changes were brought to most state JFM policies to include areas with high forest under JFM with a different sharing arrangement for the final produce harvested. This could be seen as a cultural change in the community impacting the policy structure. However, it is debatable whether this change can be attributed due to the recognised need for conservation or to having decentralized forest management by user groups.
In many places, conflicts increased between villages when protection patrols appointed by the JFMC stopped members of other villages from entering the forests for firewood cutting. These required arbitration between villages and quite often by the Forest Department and NGOs working in those villages. These conflicts had long term impacts on the relationships among villages.

Increasingly in recent years, as the forest matured, the Forest Department has stopped stating that the forest belongs to the communities, unlike during the initial JFM period. The Department now insists on following the Working Plan, rather than the local level Working Scheme or Microplan for harvesting. Due to the lack of procedural clarity, plans for harvesting and sharing of benefits promised to the community have yet to be realized. For the Working Schemes or Microplans to be approved, they have to be approved as deviations from the existing Working Plans. This is an administrative process and requires getting permission from Regional Forest Department offices. With harvesting being delayed, the initial enthusiasm of the community for the protection and upkeep of the forest, which became common across the JFM villages, seems to have changed\textsuperscript{53}. In effect, the culture that was evolving with new habits, such as voluntary protection and patrolling by men and women, has waned in recent years. In my last field visit in 2011, the Forest Department was back to the role of patrolling in most of the villages, including my study villages.

Another instance of an emerging change in collective attitude was to affirm the community rights to forests. Following a petition by a gram sabha in Odisha on their rights and authority vested under FRA to decide about how to manage the forest, the Forest Department passed a new JFM resolution. This resolution prescribes control and management by the Forest Department contradicting the management rights and authorities provided under FRA to the gram sabhas (Dash 2012). Again, this

\textsuperscript{53} I visited a number of other villages in the region that reflected the decreased interest in JFM. This is also reflected in my interviews with officers from the NGO and local forest officers working on JFM.
appears to be a case of cultural change brought in by the FRA trying to impact the JFM policy. The new JFM resolution indicates an attempt by the Forest Department to undermine the structural changes in forest management arising with the introduction of FRA. The action suggests that Forest Departments perceive that forests are best conserved under Forest Department control.

According to Archer (1996), structural changes impact culture; in forest management, the constraining and enabling interactions such as policies, impact the culture of the community and the Forest Department. Two decades after the commencement of JFM, there has been very little change in the culture that can be attributed to JFM. I look at the reasons for this lack of change in my next section, and suggest the reasons that could be responsible for the current state of JFM using the Communication-Governance model.

7.3.5 Issues identified through the communication-governance model

The 1988 National Forest Policy and the 1990 JFM Guidelines together are seen as important landmarks in forest management in India. They are seen as points of departure from the previous forest management practice of exclusive Forest Department-controlled forest, and beginning of community involvement in forest management.

My analysis of perceived attitude and behavior of the Forest Department from the Forest Department and community surveys suggests that cultural change in Forest Department has been slow. Evidence suggests that the Forest Department continues to resist changes of its core belief of conservation and control over forest. As mentioned in previous chapters, and supported by the survey results with village communities and the Forest Department, the central reason for the Forest Department to support JFM is often attributed to co-opting communities to increase forest cover, rather than using JFM as a tool for decentralized, democratized management of forest resources through community partnerships. In the past 20 years, in many of the old JFM villages, the forest cover or ‘material structure',
according to Archer (1995), has increased; however, with the management *de facto* continuing to be under the control of the Forest Department, a status quo is seen an agreeable alternative by the Forest Department. With forest lands turning from degraded to afforested, the status quo not only allows for the Department to exert pressure on the community to do its bidding, but also in many cases increases the propensity to carry on with illegitimate rent-seeking practices\(^5\).

JFMCs, as we have seen, do not have the legal basis or organisational capacity to be a "corporate agency". Hence they have limited power to impact on the prevailing structural conditions of forest management. The JFMCs have been successful in improving forest, the material structure in the model. They have not been successful in bringing changes to Forest Department policies and resolutions. As argued in the previous sections of this chapter, institutionally there is hardly any semblance of political, administrative or financial decentralization. If any issues and situations emerge, and fall under the 'perplexity stage' of Latour (2004), there are no mechanisms to allow communities to communicate and address these issues in the manner they might prefer. The power of the Forest Department gives it control of the agenda that reaches the policy makers; if a genuine ‘perplexity’ step were implemented, it would allow communities to raise issues that they want to see addressed and communicated to policy makers without gate keepers stopping the process. In theory there are some avenues for the community to address their issues, but these avenues seem to have been appropriated by the Forest Department. For example, while the Department uses people-friendly techniques such as Participatory Rural Appraisals and meetings with village community to develop Microplans and Working Scheme documents, these are neither complete in all JFM villages nor are they the guiding documents when it comes to deciding future actions. A Working Plan, that does not have to take into account the JFM forests,

\(^5\) In 2007 a Forest Department employee mentioned that often officers visited the field to collect unaccounted money. The research did not focus on this aspect.
takes precedence over these documents\textsuperscript{55}. Hence these documents serve more as window dressing, to demonstrate the participatory aspect of management without actually impacting the management practices of either the Forest Department or the JFMC.

It appears that cultural change arising from JFM in the Forest Department is minimal. While many officers in the Forest Department genuinely appreciate changes in the culture of the Forest Department – with a more inclusive people-centered approach, these changes do not appear to be easily achievable in the current structural and cultural realm.

Experience suggests that policy changes that impact the control of forests with a shift from resource conservation to decentralized resource generation and use by community, have to come with inputs from outside the Forest Department. A number of changes are required such as changes in policy, clearer processes, rules and regulation, transference in authority, and unambiguous tenures. Creating mechanisms that incorporate the stages of “perplexity”, “consultation”, “hierarchy” and “institution” could be a first step.

Once changes are brought in, they need to impact the prevailing culture of communities and the Forest Department. This requires additional arrangements to be made especially to inform the village communities and Forest Department to make them knowledgeable about these changes. There is a critical lack of information flow across the spectrum of policy implementation that occurs partly by design (the people who have access to information do not share) and partly by default (lack of mechanisms). The emerging technology seems to have the potential to improve this information flow.

\textsuperscript{55} I have been informally told that a draft Working Plan that incorporates JFM is under preparation for some areas of South Gujarat.
The Communication-Governance model has identified a number of areas that can be improved for a systemic improvement in JFM. At the level of “perplexity”, the community or stakeholders did not have mechanisms to directly reach the government at the national and state level where policies are made. For communities to register their concerns and be heard, Margaret Archer (1995) identifies the need to corporatize. However, as mentioned earlier in the section, although communities have been grouped to form JFMCs, their organisational capacity has been undermined by the Forest Department. Currently the JFMC is not independent and is under the control of the Forest Department. With the provision for JFMCs to be dissolved by the Forest Department, the JFMCs are in no position to negotiate with the Forest Department on issues that are not conducive to the agenda of the Forest Department. From a legal perspective, the gram sabhas could be in a better position than the JFMCs to negotiate. However, most gram sabhas are also not in a position powerful enough to challenge the power structure of the Forest Department due their limited financial and political strength. As described in the chapter on evolution of JFM (Chapter 5), it is when JFMCs and gram sabhas create alliances with other like-minded agents such as individual activists, powerful NGOs and other government departments that they have been able to further their interests versus the organised and powerful Forest Department. Ideally, the existence of a mechanism that does not require agents to be corporate would aid the community to reach the government and address issues of their choice i.e. the “perplexity” stage.

The current national government that came to power in May 2014 is considering new ways to use technology to reach rural communities. The government is also testing mechanisms to allow inputs from communities to reach policy makers using internet-

56 In Chapter 5 I discuss on policy formation with regards to JFM. JFM Guidelines of 1990 did not go to Parliament (it was not a Bill) and was not discussed in any public fora. Forest Rights Act which was introduced by the Ministry of Tribal Affairs (rather than the MoEF) was discussed in the public fora. Other than the Legislature, policies can be made at Executive Level (which is what happened for JFM). Policy directives can also be made by the Prime Minister’s Office, Cabinet Secretariat, Planning Commission (which has been abolished recently in 2014), Judiciary and even senior officers (with their power to frame Government Orders).
based applications. The Prime Minister’s Office has been encouraging the use of internet and social media by key ministries and ministers. The developments being recent, there is no data on how tribal communities are using and leveraging it. While this is a power-free mechanism it remains a potential unless the limited access of internet by poorer communities is addressed.

Another gap that is evident is the lack of discussion on the different dimensions (science, economy, moral, political and so on) across the four stages of Latourien constitution (2004) (“perplexity, “consultation”, “hierarchy” and “institutions”). Stakeholder consultation, wherever it existed, did not address the different dimensions and did not have discussion that involved individuals with skills in those dimensions. One of the emphases of the model is to ensure that skillholders are drawn from “conventional-experts” as well as identified “civil-experts” from the field. My research with village communities and the Forest Department suggests that current policy making neither identifies these stages nor looks at these different dimensions.

The model makes it clear that after the deliberations at the consultation stage further processes are required and the process must transit the stage of “hierarchy” before institutionalisation. At this stage deliberations are required on issues of forest management and its connections to Panchayati Raj institutions, the Forest Right Act, the Forest Development Agencies and other rural development agencies that have a bearing on the community and those that require policy and procedural adjustments. Currently due to lack of adequate discussions, gaps arise. This is evident from the conflicts that exist between the different laws and policies mentioned earlier.

At the “institution” stage, the roles at the national and state level are crucial. While the states have the Constitutional authority to decide on the modalities of the policy to be followed, they also have the additional responsibility to be explicit and clear in detailing the implementation process. It is here, that many of the policies of the government flounder and become ineffective when no clear processes and guidelines exist. This is also mentioned by the Forest Department as one of the
major issues. When developing rules and procedures for implementation, following the Governance-Communication model of having “skillholders” from different dimensions, would strengthen the outcome. This is because the outcome would be a result of deliberation with individuals from “civil-experts” as well, allowing for a better understating of what is needed during implementation.

The next stage is the interface between structure and culture. At this stage institutionalisation has been accomplished but the information needs to be transferred to citizens, including individuals from communities, the Forest Department and NGOs. This is the “perplexity” stage in the cultural realm as mentioned in the model (stage of meaning and impact). This stage and the following stages (when the individual evaluates the information) are crucial stages that require adequate preparation of the individual. This can be accomplished by information sessions, training, discussions, exposure visits, attitudinal and behavior change programs to assist in assimilating the new information in the best possible way.

The model hence also suggests that structural changes in terms of policies, procedures, and programmes that are put forth can have an effect on the prevailing culture if properly implemented. It also suggests that radical structural changes may lead to conflict and may be unacceptable to the interest groups, especially if they are not apprised correctly of its benefits or if they find it detrimental to their interests. In the JFM situation, these groups are the village communities, the Forest Department and in many cases NGOs. In instances of high unacceptability, the changes will be rejected, requiring further deliberation at the structural level. As discussed in previous sections, the components of JFM that are not intrinsically acceptable to the Forest Department culture are thwarted and nullified by various means.

Anticipating such reactions for policy would hence become one of the jobs of policy makers and would require periodic socio-cultural research and mechanisms to monitor changes at the cultural level.
In my next chapter, I conclude the thesis by consolidating my findings as set out in my original objectives.
CHAPTER 8: CONCLUSIONS AND RECOMMENDATIONS

8.1 Introduction

The main aim of this research was to understand the communication challenges in Joint Forest Management. I studied the perceptions of communities and the Forest Department, the two main collaborators of Joint Forest Management. These perceptions have enriched the understanding of communication challenges. Surveys of three village communities and the Forest Department were conducted. These surveys yielded insights on various communication and governance challenges that existed at various stages of JFM. Using an analytical model gave a comprehensive picture of communication challenges across various stages and levels of governance. The model also gave a better understanding of how these challenges varied over time and related to one another. This allowed me a better understanding of the communication gaps, especially the identification of areas where mechanisms for effective communication processes were lacking. The Communication-Governance model has the potential to help design ideal communication strategies taking into account the complexities of governance. The model also suggests creation of mechanisms that can reduce power imbalances.

8.2 Key findings

8.2.1 Challenges due to lack of adequate mechanisms

One of the major findings is that the current efforts to improve communication by the Forest Department was sporadic across the four stages (as described by Latour, 2004) and tended to concentrate only at “institution”. Efforts by the Forest Department to improve communications at the “perplexity”, “consultation” and “hierarchy” stages were lacking as these stages were routinely bypassed within the current mechanisms. Communication mechanisms for the purpose of systematic response at the “perplexity” stage were sporadic. They were also not easily accessible or power free for communities to address issues of their choice. While institutions such as the Divisional Level Working Groups and State Level Working
Groups existed, these require to be redesigned to function as nodes for efficient communication. Starting with the first stage of being able to address the issues, these institutions should allow the community to set the agenda for discussions rather than the Forest Department. The Forest Development Agency (FDA) also has a potential to be a mechanism for information flow between communities and the State as well as the National level authorities. Current information channels are not designed with the purpose of providing opportunities to the communities to raise issues that are important to them or issues that they want addressed without being co-opted into the Forest Department frameworks. For example, currently communities make inputs into the Working Scheme and Microplan preparation, the format of which is prepared by the Forest Department. Even if some of their concerns are documented these are not adequately addressed as these documents are rarely used after their preparation.

The Beat Guard was perceived by the community and the Forest Department as the main communicator representing the Forest Department. However the Beat Guard was seen by the Forest Department as having inadequate social skills. The Forester was mentioned in the community survey as the main “actor” who communicated various schemes and programmes to the community. For the community, there was a perception that the President and Secretary of the JFMC were the main spokespersons. However, lack of adequate mechanisms for information flow from the JFMC to the larger village community, such as irregular meetings, lack of direct correspondence and rare use of notice boards, restricted the information to a few in the community. The Forest Department rarely had any direct formal communication with the community members other than through village meetings. NGOs and individuals who also played prominent roles had developed ad hoc relationships with the Forest Department. While such stakeholders were co-opted into the “consultation” stage there was no transparency or systematic linkages to their constituencies. Fundamentally, institutions with a legally-binding mandate to listen to citizens’ concerns and to respond to them did not exist, unless the issues were taken to judicial courts.
8.2.2 Challenges due to entrenched power relations and practices

The Forest Department survey suggested that Joint Forest Management has brought in substantial changes in the form of increased participation, consultation and collaboration with communities. This perception was also corroborated by the communities. However, there was also evidence that despite these changes, entrenched practices have continued, even after the advent of Joint Forest Management. The Forest Department continues to retain the role of policing and controlling most decisions related to management of forest lands. While these functions of the Forest Department were seen as important both by the Forest Department and the communities, one accusation against the Department is that it abuses its power by initiating verbal agreements that are not always honored. The Forest Department also enjoys the power to dismantle the JFM institutions and decide on the kind of funding and other support that a community can get. This is a key aspect indicating power imbalances. Apart from a few NGO-supported villages, the majority of the villages depended on government funded programmes and schemes. These findings are consistent with other collaborative approaches like watershed management where requirement of funding, leadership and interpersonal trust are seen as recurring themes (Leach & Pelkey 2001). While Forest Development Agencies and Microplan preparations allowed for certain input into the possible programmes, the management of these programmes and finances were strictly controlled by the Forest Department. Forestry works are taken up on behalf of the communities by the Forest Department. These are critical practices that require changes in both design and implementation. While written agreements were common in communities, many important decisions with the Forest Department in JFM are oral and these oral decisions sometimes take many years to be translated into written agreements. In many cases the oral and written agreements did not match, for example the area of forest land allocated on the basis of Adhikar Patra (Record of Rights). The forest area allocated to a community was quite often much smaller than in the verbal agreements committed during the JFM initiation. The
communities often ended up protecting a larger area and then getting written agreements for a smaller area many years later.

8.2.3 Challenges due to emerging technology

Emerging technology is a promising field that is being considered by both the Forest Department and the communities for use in improving communication. There was anecdotal evidence of rapid changes occurring in interior tribal villages as a result of new technologies. In many villages, the first phones to be available are cellular. Desk-top computers are being replaced by laptops, tablets and smart phones even in small towns like Mandvi. There were instances of individuals getting information using these devices with roaming internet data plans to access information. However these instances are limited and large sections of village communities were neither familiar with nor have access to these emerging technologies.

The challenges in incorporating new technology involve the ability to understand the skill levels of the community and to establish effective skill enhancing mechanisms. This research suggests the need for a multipronged approach that can cater to improving infrastructure to utilize emerging technology, along with establishing mechanisms for direct, face to face interactions with community members who prefer direct communication, i.e. the majority of them. The Forest Department in Gujarat had initiated state-wide interactions and discussions through net-based technologies. However, there was no systematic study to assess the scope and potential applications of these technologies in forest management that involved tribal village communities. As expected, the reactions of senior Forest Department officers surveyed from across India and the community members from the three research villages were mixed and both have expressed optimism about the potential, as well as expressing some apprehension.

8.3 Policy implications

The research surveyed a broad spectrum of senior forest officers involved with policies at the state and national level. At both these levels there was a need
expressed by the Forest Department to update the current communication approaches and have a long-term communication strategy. The Communication – Governance model, along with the perceptions of senior officers and the communities, gives a perspective on the current challenges and the possible solutions when designing such communication strategy. At the national and state level, there are two approaches that could adopt some of the learnings. One is for the Ministry of Environment and Forests and the state Forest Departments to keep appraised of situations on the ground through communication mechanisms that are open to the wider public. Secondly, all the stages of the model (“perplexity”, “consultation”, “hierarchy” and “institution”) and the mechanisms required for each of these stages when developing a new policy or modifying an existing one need to be designed. These mechanisms and processes require to be first “instituted” within the government so that they can be reflected regularly in governance.

Other applications of the model could be for designing special projects or programmes or themes that are implemented by MoEF for certain regions. The Biodiversity Conservation and Rural Livelihood Improvement Project (BCRLIP) that the MoEF is currently implementing with funding from the World Bank is a good example. Such projects can use the generic information from the study and use the model to understand particular levels of structure to design communication strategies appropriate to that level. It will also necessitate a better understanding of the culture of the area and help in anticipating the impact of decisions taken. By following the different dimensions and stages it is likely that any decisions taken will be far more researched from multiple dimensions and relevant to both the government and local communities.

8.4 Implications for implementation

The current practice of ad hoc information dissemination and ad hoc verbal agreements with community are areas that require to be redesigned. While the community survey mentioned avenues where the Forest Department and communities currently communicate, these were neither regular nor effective.
Attendance in sporadic community meetings, meetings when engaging local labour, or meetings for information at the Forest Department offices, indicated the existence of some communication. For effective governance these interactions need to be more organised and preferably across the four stages and multiple dimensions at the cultural level. The Forest Department at the local level has a major role in developing these interfaces through adequate information, training, and discussion among others so that the communities take informed decisions. In many situations it may require working through existing mechanisms, such as the Divisional Level Working Groups, Forest Development Agencies or specific bodies like the JFM Cells, to make it effective. At the same time, as revealed in the Forest Department survey, there is a need for the training of Forest Department staff in a number of areas, including attitudinal and behavioral change.

8.5 Applicability of research to other governance situations

The research and the model throw light on the interface between governance and communication in forest management. It explored the linkages between various levels and dimensions and helped to delineate communication processes over a period of time. This method could also be used in other governance situations.

In recent years most other government departments, for example the Ministry of Rural Development (with their Integrated Watershed Management Programme) and the Ministry of Water Resources (with their Participatory Irrigation Management) have developed linkages with communities to implement their programmes. In these programs, similar to Joint Forest Management, user-based institutions at the community level have been created to implement the programme jointly with the concerned departments. An important criterion for effective and functional co-management programme that can be learnt from similar programmes globally is the availability of mechanisms to take speedy management decisions when required. Other criteria that are learnings for effective co-management of natural resources are: sense of ownership, increased transparency of processes, equitable distribution of resources, and adoption of community perspective. All such programmes could
potentially use the Communication – Governance model to understand both the Governance and Communication situation in their respective programmes and design ways to improve them.

Apart from the programmes with community-government agreements, all departments that are involved with the creation of policies and regulations could also potentially make use of the model. The model could give a better understanding of the situation and help in designing policies and communication strategies.

8.6 Limitations of the research

1. Changes occurred in design as the research progressed. The research did not start with the Communication – Governance model. The model was developed at a later stage of research while analyzing data and looking at various levels of governance. Hence the questionnaires were not designed to look at different levels of governance with all the potential stages and dimensions suggested by the model.

2. The structural level that was chosen for the study was the village community level. At the state and national level the questionnaires were designed differently to capture the perceptions of the Forest Department. While this was a limitation, the outcome was still useful as it showed that when not using the model, the discussions on communication could be confined to certain stages and dimensions. In this research the Forest Department’s responses were mostly at the stage of “institution” (policy implementation) and very little on the other three stages of “perplexity”, “consultation” and hierarchy”. The discussions were also mostly centered on scientific management and not much on the economics, moral or political dimensions of forest management.

3. The cultural implications of the model were also not adequately studied in this research. The original design to study two culturally different situations to develop a culturally sensitive model had to change. However, the current model addresses cultural aspects and integrates it with structural changes. Nevertheless, theoretical connections between structure and culture that are elaborated in the model do not
adequately take into account various other factors, specifically the influence of external situations that impact culture.

4. My sample of three villages is only indicative and is not representative of Gujarat State or India. I interviewed a cross-section of Gujarat forest officers and staff. Among the field staff, I could only interview RFOs and Foresters and was unable to formally interview Beat Guards in 2011 despite many attempts. However, I have interacted with Beat Guards on several occasions (on the issue of communication in JFM) during 15 years of my work on JFM in Gujarat and other states and in my pre-field work visits for my research.

5. A number of Senior IFS officers I surveyed from 19 states of India had not worked in a JFM situation and had very limited interaction with the community in recent years. Hence, their opinion could possibly be limited to general perception of communication in JFM and not necessarily rooted on actual recent field experiences. Thus, while a number of insights from the surveys (with villages, Gujarat State Forest Department, and IFS officials) may be applicable to a larger area; additional research would be needed for generalizing across either the state or the nation.

8.7 Recommendations and future research

The research uses the theoretical frameworks of Margaret Archer (1995, 1996) and Bruno Latour (2004) to develop a common framework that allows for a much greater interpretation of the situation and causal linkages. While Latour’s new Constitution is seen as way forward to arrive at solutions through stages of participatory approaches, it requires to be transformed into real life governance applications. During interactions with senior IFS officers from state Forest Departments as well as from the MOEF, many officers expressed interest in developing a comprehensive communication strategy. They could explore if future communication strategies that are framed can transcend the current approaches of information dissemination and extension activities and adopt inclusive approaches that seek increased citizen role in the multiple stages as envisaged in the Communication- Governance model.
The research suggests that current situation of JFM in India leaves much to be desired for realizing its true potential. Establishing a systematic communication mechanism is only a beginning to find agreeable solutions to a large number of issues that seem to be left untouched. How to institutionalize such approaches so that the process of policy formation and its subsequent steps are not haphazard but is a continuous process is a research to be undertaken.

Additional research is needed to further test the Communication-Governance model in other governance contexts as well. Preliminary discussions with academics from other fields related to governance suggest possible use of this model in governance situations such as participatory irrigation management (public presentation of the model at Institute of Asian Research, UBC, 2014). Refinement of parameters necessary for identifying the different dimensions and “skillholders” require further exploration. While it might be easy to identify “skillholders” with established credentials, i.e. “conventional-experts”, it may require further research to find the best ways to identify “skillholders” at the community level, i.e. the “civil-experts”.
REFERENCES


ICFRE, 2008. *Mid term evaluation of the national afforestation programme (NAP) scheme implemented though forest development agencies (FDAs)*, Dehradun: EIA, Directorate of Extension, ICFRE.


Mukherjee, N. et al., 2008. Forestry as safety net: Listening to the voices of the poor from 15 forest villages in India. Available at: http://www.eldis.org/fulltext/ForestryAsSafety%20Net_Development%20Tracks.pdf [Accessed November 17, 2014].


Sarin, M. et al., 2003. *Devolution as a threat to democratic decision-making in forestry?: Findings from three states in India*, Sussex: Overseas Development Institute.


Sliammon Natural Resources Committee, 2005. We raise our hands in praise to our Ancestors: Land and water use plan for Tla’amin traditional territory. Sliammon Indian Band.


APPENDIX 1: ORGANISATIONAL STRUCTURE OF GUJARAT FOREST DEPARTMENT

APPENDIX 2: ORGANISATIONAL STRUCTURE OF MINISTRY OF ENVIRONMENT AND FORESTS

APPENDIX 3: QUESTIONNAIRES

Questionnaire for Tribal Community Ver1.0.doc

Village Survey

A. Identification

1. Identification and location of household
   a. Household Number: ________________________________
   b. Name of respondent: ________________________________
   c. Name of village/community: ____________________________
   d. Name of hamlet: ________________________________

2. Information about the respondent/household
   a. Age: ___________ (full years)
   b. Gender: __________
   c. Religion: Hindus .... Christian .... Muslim .... Any Other ....
   d. Name of your caste: Chaudhry .... Vasava .... Any Other ....
   e. What is your highest educational qualification? ....
   f. Below Poverty Line (BPL) .... Above Poverty Line (APL) ....
   g. Are you or anyone in your household a member of the JFM Samiti?
      Yes .... No .... Don’t Know ....
   h. Have you been a member of the JFM Committees? Yes .... No ....
   i. Has anyone else in your family been a member of the JFM Committee?
      Yes .... No ....
   j. Have you been President/Secretary of any other institution in your village?
      Yes .... No .... If yes, please give details ....
   k. What is your main occupation? ....
   l. Have you worked in the Forest Department? Yes .... No ....
   m. Do you have a relative working in the Forest Department? Yes .... No ....
   n. Have you worked for any NGO? Yes .... No ....
   o. Have you worked as a paid watchman for your JFM Samiti? Yes .... No ....
   p. Do you have agriculture farm in forestland / ekali? Yes .... No ....

Your village has been involved in the Joint Forest Management (JFM) programme for many years now. We would like to ask your opinion and suggestions about this programme.

B Latourian processes:

Perplexity

1. JFM was adopted in degraded forest areas. What do you think were the causes for forest degradation near your village?
   a. ________________________________
   b. ________________________________
   c. ________________________________

   Don’t Know

2. Before JFM was adopted in your village, did you face any problems in accessing the forest and/or collecting forest products?
   Yes .... No .... Don’t Know ....

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b. If yes, please list the problems you faced
   1. ...........................................................................
   2. ...........................................................................
   3. ...........................................................................

c. If no, what other problems regarding the forest did you face?
   1. ...........................................................................
   2. ...........................................................................
   3. ...........................................................................

Consultation
5. a. Did you know when the decision to adopt JFM was being taken by your village?
   Yes  ......  No  ......

b. If Yes, when did you come to know that your village was considering adopting JFM? Year
   .................................................................

6. a. Did you think it was the right thing to do?
   Yes  ......  No  ......  Don’t Know  ......

b. Please give reasons for your answer.
   ...........................................................................

7. a. How often did you voice your opinion about having JFM in your village?
   Always  ......  Quite often  ......  Sometimes  ......  Rarely  ......  Never  ......

b. If yes, please give details
   1. What did you say? .................................................................
   2. Whom/what forum did you say to? ...................................................
   3. What happened after that? ...............................................................  

   ...........................................................................

   c. If no, why did you not voice your opinion? ........................................
   ...........................................................................

Hierarchy
8. What changes happened to your life after JFM was adopted by your village? Please list.
Also mention if you anticipated these changes while adopting changes?
   ...........................................................................
   anticipated  ......  did not anticipate  ......
   ...........................................................................
   anticipated  ......  did not anticipate  ......
   ...........................................................................
   anticipated  ......  did not anticipate  ......

Institution
9. a. How often did you or anyone in your family ever go for forest protection (khal)?
   Always  ......  Quite often  ......  Sometimes  ......  Rarely  ......  Never  ......

b. If yes, when was the last time you or someone in your family went for protection?
   Year  ..................  Month  ..........................
10. a. How often did you or anyone in the family pay for a JFM watchman for forest protection?

Always ..... Quite often ..... Sometimes ..... Rarely ..... Never ..... 

b. If yes, when was the last time you or someone in your family paid for a forest watchman?
Year .......... Month ............... 

11. a. How often did you or anyone in the family attend JFM general body meetings?

Always ..... Quite often ..... Sometimes ..... Rarely ..... Never ..... 

b. If yes, when was the last time you or someone in your family attended a general body meeting?
Year .......... Month ............... 

Bureaucrat

12. a. How easy is it to get timber for building houses?

Very easy ..... Easy ..... Neutral ..... Difficult ..... Extremely difficult ..... 

b. How often did you require timber for house building from your forest?

Always ..... Quite often ..... Sometimes ..... Rarely ..... Never ..... 

c. If yes, how often did you request the Forest Department?

Always ..... Quite often ..... Sometimes ..... Rarely ..... Never ..... 

d. If yes, how often did you request the JFMC?

Always ..... Quite often ..... Sometimes ..... Rarely ..... Never ..... 

e. If requested, did you do your last request verbally or in written form?

Verbal ..... Written ..... 

f. When did you make your last request? Year .......... Month ............... 

g. To whom did you make the request?

......... JFMC ........... 

Forest Department

h. Was your request accepted?

Yes ..... No ..... Don’t Know ..... 

i. How often did you have to pay a fine to the forest department to get approval of the timber you collect from forest for house building?

Always ..... Quite often ..... Sometimes ..... Rarely ..... Never ..... 

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13. How functional is your JFM Committee?

Always ..... Quite often ..... Sometimes ..... Rarely ..... Never ..... 
Don't Know ..... 

14. Are they fulfilling their objectives?

Always ..... Quite often ..... Sometimes ..... Rarely ..... Never ..... 
Don't Know ..... 

15. Do they keep a record of meetings and discussions?

Always ..... Quite often ..... Sometimes ..... Rarely ..... Never ..... 
Don't Know ..... 

16. Do they keep a record of money transactions?

Always ..... Quite often ..... Sometimes ..... Rarely ..... Never ..... 
Don't Know ..... 

17. Is there regular election/selection/nomination of office bearers?

Always ..... Quite often ..... Sometimes ..... Rarely ..... Never ..... 
Don't Know ..... 

18. When was the last election/selection/nomination? Year........Month......... 

19. How was the election/selection/nomination done?

majority vote ..... by ballot ..... internal meeting ..... other, please describe ..... 

Don't Know ..... 

20. Did you or anyone in your family go to attend the last meeting to elect/select the committee members?

Yes ..... No ..... 

a. If no, why did not go?


C. Different Means of Communication

Source/Receiver

21. a. Please list the reasons for communicating with the forest department
b. How often have you or anyone in your family communicated with the forest department for any reason?
Always ...... Quite often ...... Sometimes ...... Rarely ...... Never ......

c. If yes, when was the last time that you communicated? Year ...... Month......

d. With whom did you communicate? ..............................................................

  e. How did you communicate?
  Verbal ...... Non-verbal ...... Written ......

  f. If Verbal, where did this happen?
  FD office ...... village meeting ...... at home ...... forest ...... other, please describe ......
  ...........................................................................................................................

  g. If written, to whom did you give your written document?
  Village representative ...... FD representative ...... other, please describe ......
  ...........................................................................................................................

  h. If written, where did you give your written document?
  FD Office ...... village meeting ...... other, please describe ......
  ...........................................................................................................................

  i. What was the reason for the communication? Please describe
  ...........................................................................................................................

  j. Looking back, do you think it could have been done better?
  Yes ...... No ...... Don’t Know ......

  k. If yes, how do you think this communication could have been improved?
  ...........................................................................................................................

  ...........................................................................................................................

  22.a. Do you think you have had a ‘good’ communication at any time with the Forest Department?

  Yes ...... No ......
  [b. If yes, please give details of the event that you remember.
  ...........................................................................................................................
  ...........................................................................................................................
  ...........................................................................................................................
  ...........................................................................................................................

  (What happened, why did you think it was ‘good’, was it verbal or written, did you get a response back from the personnel that you communicated with, do you think you can repeat the communication presently, were you satisfied with the outcome, did you benefit in that event, did it improve your life in any way?)

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Content
23. In your opinion, what are a few things about forest that you would like the forest department to know?

   a. Are there any current issues/difficulties?
      a. ...........................................................
      b. ...........................................................
      c. ...........................................................

   b. How can the forest be improved?
      a. ...........................................................
      b. ...........................................................
      c. ...........................................................

24. a. When making a decision on what to be done in the forests that you use, who should make the decision?

FD ...... Community ...... Jointly ...... Other, please describe ......

b. How does this decision happen now?

FD decides ...... Community decides ...... Jointly decided ...... Other, please describe ......

25. a. When making decisions in the village on forest, how should the decision be made?

   Majority Vote ...... Consensus ...... by Elders or 42h4h3s ...... Other, please describe ......

b. How does this happen now?

26. a. How should the benefits from the forest be distributed?

   Shared equally among those who can contribute ......
   Shared equally with all community households irrespective of contribution ......
   Other (please elaborate) ...........................................................

b. How does this happen now?

27. a. Have you received any individual benefits (cows, well, etc) from the forest department?

Yes ...... No ......
b. If yes, what did you get?


c. Had you requested for the benefit?
Yes ........ No ........

d. How did you request?
Verbally ........ Written ........ Any other ........

Attending group meetings

28. Please give details about the following meetings: when was it held and if you attended it?

<table>
<thead>
<tr>
<th>Are you aware of the following meetings?</th>
<th>When was the last meeting held?</th>
<th>When did you last attend such meeting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Village JFM meetings (only community)</td>
<td>Year ... Month ...</td>
<td>Year ... Month ...</td>
</tr>
<tr>
<td>Yes ....... No .......</td>
<td>Don't Know ...</td>
<td>Never attended ...</td>
</tr>
<tr>
<td>Meetings in village with FD</td>
<td>Year ... Month ...</td>
<td>Year ... Month ...</td>
</tr>
<tr>
<td>Yes ....... No .......</td>
<td>Don't Know ...</td>
<td>Never attended ...</td>
</tr>
<tr>
<td>Meetings outside village with FD</td>
<td>Year ... Month ...</td>
<td>Year ... Month ...</td>
</tr>
<tr>
<td>Yes ....... No .......</td>
<td>Don't Know ...</td>
<td>Don't Know ...</td>
</tr>
<tr>
<td>Meetings in village with NGO</td>
<td>Year ... Month ...</td>
<td>Year ... Month ...</td>
</tr>
<tr>
<td>Yes ....... No .......</td>
<td>Don't Know ...</td>
<td>Don't Know ...</td>
</tr>
<tr>
<td>Meetings outside village with NGO</td>
<td>Year ... Month ...</td>
<td>Year ... Month ...</td>
</tr>
<tr>
<td>Yes ....... No .......</td>
<td>Don't Know ...</td>
<td>Don't Know ...</td>
</tr>
</tbody>
</table>

Getting Information

29. Please give details about places where you discuss the forest?

<table>
<thead>
<tr>
<th></th>
<th>Always</th>
<th>Quite Often</th>
<th>SOMETIMES</th>
<th>RARELY</th>
<th>NEVER</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  JFMC meetings</td>
<td></td>
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<td></td>
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<tr>
<td>2  Traditional gatherings like nijamoni</td>
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<td>3  FD meeting in village</td>
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<td>4  FD meeting in office</td>
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<td>5  NGO meeting in village</td>
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<td>6  NGO meeting in office</td>
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<td>7  At home with family</td>
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<td></td>
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<td>8  With relatives</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>9  With friends</td>
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<td>10 During visit to the market</td>
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<tr>
<td>11 Others (please elaborate)</td>
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<td>12</td>
<td></td>
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</tbody>
</table>
30. Please give details about the frequency that you get information about policies, rules and programmes of the Forest Department from these sources?

<table>
<thead>
<tr>
<th></th>
<th>Always</th>
<th>Quite Often</th>
<th>Sometimes</th>
<th>Rarely</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Forest Department office</td>
<td></td>
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<tr>
<td>2</td>
<td>Beat guard</td>
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<td>3</td>
<td>Forester</td>
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<td>4</td>
<td>Range Forest Officer</td>
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<td>5</td>
<td>Assistant Conservator of Forest</td>
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<td>6</td>
<td>Divisional Forest Officer</td>
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<td>7</td>
<td>FD Range office</td>
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<tr>
<td>8</td>
<td>FD Round office</td>
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<tr>
<td>9</td>
<td>FDA Meeting</td>
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<tr>
<td>10</td>
<td>Divisional Level Working Group meetings</td>
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<tr>
<td>11</td>
<td>While engaged in forest labour work</td>
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<td>12</td>
<td>Gram Saval</td>
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<tr>
<td>13</td>
<td>Sub Divisional Magistrate office</td>
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<tr>
<td>14</td>
<td>Mamladar Office</td>
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<tr>
<td>15</td>
<td>Tribal Development Office</td>
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<td>16</td>
<td>Specific project office in Mandvi</td>
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<tr>
<td>17</td>
<td>Political meetings</td>
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<tr>
<td>18</td>
<td>Panchayat meetings</td>
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<tr>
<td>19</td>
<td>NGO worker</td>
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<tr>
<td>20</td>
<td>NGO office</td>
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<tr>
<td>21</td>
<td>NGO meetings</td>
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<tr>
<td>22</td>
<td>Training program</td>
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<tr>
<td>23</td>
<td>Study tours</td>
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<tr>
<td>24</td>
<td>Village elder (Agrawal)</td>
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<tr>
<td>25</td>
<td>JFM Committee member</td>
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<tr>
<td>26</td>
<td>Village meeting</td>
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<tr>
<td>27</td>
<td>Traditional village meetings (Ujjamani)</td>
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<tr>
<td>28</td>
<td>Notice board in village</td>
<td></td>
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</tr>
<tr>
<td>29</td>
<td>Religious Group (Bhajan Mandal)</td>
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<tr>
<td>30</td>
<td>Woman’s Group (Mahilo Mandal)</td>
<td></td>
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<tr>
<td>31</td>
<td>Self-help groups (SHG)</td>
<td></td>
<td></td>
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<tr>
<td>32</td>
<td>Market</td>
<td></td>
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<tr>
<td>33</td>
<td>Meeting with other successful communities</td>
<td></td>
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<tr>
<td>34</td>
<td>Fairs (mela)</td>
<td></td>
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<tr>
<td>35</td>
<td>Marriages’ Engagement</td>
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<tr>
<td>36</td>
<td>Husband/wife</td>
<td></td>
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<tr>
<td>37</td>
<td>Other Family members</td>
<td></td>
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<tr>
<td>38. Relatives</td>
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<td>39. Friends</td>
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<td>40. Newspaper</td>
<td></td>
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<tr>
<td>41. Information booklet</td>
<td></td>
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<td>42. Newsletter</td>
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<tr>
<td>43. Radio</td>
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<td>44. Television</td>
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<td>45. Movies</td>
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<tr>
<td>46. Video Cassette Recorder (VCR)</td>
<td></td>
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<td></td>
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<tr>
<td>47. Internet</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>48. Email updates</td>
<td></td>
<td></td>
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<tr>
<td>49. Festival gatherings</td>
<td></td>
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<tr>
<td>50. Study tours (Pyevac)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Others (please elaborate)</td>
<td></td>
<td></td>
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</tbody>
</table>

**Communication and Technology**

31. How do you currently communicate with the FD?

<table>
<thead>
<tr>
<th></th>
<th>Always</th>
<th>Quite Often</th>
<th>Sometimes</th>
<th>Rarely</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Speak face to face</td>
<td></td>
<td></td>
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<tr>
<td>2. Speak to a leader who speaks on behalf of you</td>
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<tr>
<td>3. Go with a group</td>
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<td>4. Attend a meeting</td>
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<td>5. Write a letter</td>
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<tr>
<td>6. Telephone/Cellular</td>
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<tr>
<td>7. Email</td>
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</tr>
<tr>
<td>8. Go on a rally</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Others</td>
<td></td>
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<tr>
<td>10.</td>
<td></td>
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</tr>
</tbody>
</table>

32. How effective do you think the above methods are?

<table>
<thead>
<tr>
<th></th>
<th>Always</th>
<th>Quite Often</th>
<th>Sometimes</th>
<th>Rarely</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Speak face to face</td>
<td></td>
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<tr>
<td>2. Speak to a leader who speaks on behalf of you</td>
<td></td>
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<tr>
<td>3. Go with a group</td>
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<tr>
<td>4. Attend a meeting</td>
<td></td>
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<tr>
<td>5. Write a letter</td>
<td></td>
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<tr>
<td>6. Telephone/Cellular</td>
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<tr>
<td>7. Email</td>
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<td></td>
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<tr>
<td>8. Go on a rally</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Others</td>
<td></td>
<td></td>
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<tr>
<td>10.</td>
<td></td>
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</tr>
</tbody>
</table>
33. Which communication methods do you think are useful (even if you use it or not) for the following occasions?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Verbal</th>
<th>Written</th>
<th>Both</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taking loan from mahajis (money lender)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixing marriages</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agriculture produce auction/sale</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decision to conduct <em>ujamani</em> (traditional meeting)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Giving land on lease</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

34. a. Do you know which welfare schemes and programmes of the Forest Department are available to you?

Yes: ......       No: ......

b. If yes, how did you come to know? ________________________________

c. If yes, how easy or difficult was it to get this information:

Very easy ...... Easy ...... Neutral ...... Difficult ...... Extremely difficult ......

35. a. Have you been a member of a Forest Department committee or forum for policy making?

Yes: ......       No: ......

b. If yes, did you or committee have access to community level opinion or perception about the policy being formed?

Yes: ......       No: ......

c. Please elaborate on the policy that you worked on

.................................................................................................................................

.................................................................................................................................

D. Opinion/perception about the Forest Department

36. Do forest department officials listen to what you want to say?

Always: ......   Quite often: ......   Sometimes: ......   Rarely: ......   Never: ......

37. Are forest department officials interested in what you want to say?

Always: ......   Quite often: ......   Sometimes: ......   Rarely: ......   Never: ......

38. Do you understand what FD officials say during meetings?

Always: ......   Quite often: ......   Sometimes: ......   Rarely: ......   Never: ......
39. Do they speak in a language that you understand?

Always ....... Quite often ....... Sometimes ....... Rarely ....... Never .......

40. In your opinion who in the village communicates with the FD? Name of individual is: 

41. In your opinion who in the FD communicates with the village community? Name of individual is: 

42. What in your opinion are issues or barriers for communicating with the forest department?
   a. ..............................................................................................................
   b. ..............................................................................................................
   c. ..............................................................................................................
   d. ..............................................................................................................
   e. ..............................................................................................................

43. What suggestions do you have for improving communication with the forest department?
   a. ..............................................................................................................
   b. ..............................................................................................................
   c. ..............................................................................................................
   d. ..............................................................................................................
   e. ..............................................................................................................

44a. Do improved relations with an individual forest officer improve communication?

Always ....... Quite often ....... Sometimes ....... Rarely ....... Never .......

Don't Know .......

b. If yes, how can this relationship be improved?
   a. ..............................................................................................................
   b. ..............................................................................................................
   c. ..............................................................................................................

45. We would like to know about your opinion of the Forest Department.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. The department is very transparent</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>b. The department is like the police department</td>
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<tr>
<td>c. The department listens to the community</td>
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<tr>
<td>d. The Forest Department personnel are rude</td>
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<tr>
<td>e. It is best to keep away from the Forest Department</td>
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<tr>
<td>f. It is easy to communicate with the Forest Department</td>
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<tr>
<td>g. The Forest Department informs the community about various schemes</td>
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</tbody>
</table>
Thank you for your time!

Notes
**Questionnaire for Group Discussion**

**A**

There are many activities that happen under co-management. For example: Fuel wood extraction, Timber, Plantation Project, village development programmes supported by forest department.

For each of them, what role does the management committee play to take decisions? Elaborate, how it happens.

Would the decision been different if there was no management committee?

**B**

Discussion on the following matrix questions:

<table>
<thead>
<tr>
<th></th>
<th>Perplexity (Pre Agreement)</th>
<th>Consultation (Pre Agreement)</th>
<th>Hierarchy (Agreement)</th>
<th>Institution (Post Agreement)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Science</strong></td>
<td>What relationship did you have with the forest?</td>
<td>What did you agree to change?</td>
<td>What changes did this bring to the community?</td>
<td>Has this now been completely accepted?</td>
</tr>
<tr>
<td></td>
<td>What difficulties arose?</td>
<td>What practices did you give up/take up?</td>
<td>How did this affect everybody?</td>
<td>If no, what are the remaining issues?</td>
</tr>
<tr>
<td><strong>Politics</strong></td>
<td>How was the relationship with the forest governed?</td>
<td>What did you agree to change?</td>
<td>What changes did this bring to the community?</td>
<td>Has this now been completely accepted?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>What practices did you give</td>
<td>How did this affect</td>
<td>If no, what are</td>
</tr>
<tr>
<td>Economics</td>
<td>Moral</td>
<td>difficulty arose?</td>
<td>up/take up?</td>
<td>everybody?</td>
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<td>--------------------</td>
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<tr>
<td>How was the</td>
<td>How did you</td>
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<tr>
<td>relationship</td>
<td>view your</td>
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<tr>
<td>benefitting the</td>
<td>agree to change?</td>
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<td></td>
<td></td>
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<tr>
<td>community?</td>
<td>what practices</td>
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<td></td>
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<tr>
<td>What</td>
<td>did you give up/take</td>
<td></td>
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<td></td>
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<tr>
<td>difficulties</td>
<td>up?</td>
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<td>arose?</td>
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<td>What changes did</td>
<td>Has this now been</td>
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<td></td>
<td></td>
<td>this bring to the</td>
<td>completely</td>
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<td></td>
<td></td>
<td>community?</td>
<td>accepted?</td>
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<td></td>
<td></td>
<td>How did this</td>
<td>If no, what are</td>
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<td></td>
<td></td>
<td>affect everybody?</td>
<td>the remaining</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>issues?</td>
<td></td>
</tr>
</tbody>
</table>

C

What communication mechanisms are used for indigenous ceremonies and functions to inform the whole village? (Elaborate on the methods, language, processes etc.)

Example: Marriage, death of a person, village festival

Develop a Matrix ranking of current ways of communication.
Questionnaire for NGOs

1. Name:
2. Designation:
3. Organisation:
4. Place of posting:
5. Number of years of service:
6. Number of years of working in co-management areas:

7. What is your opinion about communication between the forest department and community in co-management? Is it going well, are there difficulties? Why?
8. Does communication differ over the period of co-management? Was it different before co-management agreement, and after co-management agreement? Are there any distinct events or phases when communication is high/low?
9. There are many aspects of co-management that need clarity between forest department and community. For example, the responsibility of each partner. Do you think these have been clearly communicated and understood by both partners?
10. How does the forest department get feedback from the community on issues that they face while implementing? What channels exist?
11. What is better, oral communication or written communication? What is more effective and clear when it comes to instances that require taking action by the forest department? Is there a procedure developed for such situations? For example: permission for timber.
12. What methods can be used to increase the effectiveness of communication between forest department and community? Do you think new technologies like mobile phones, Internet are possible ways to communicate?
13. Who in the forest department hierarchy do you think is the main contact with the community? In turn: who in the community is the main contact for the forest department?
14. If general information that affects everyone in the village has to be communicated what strategy forest department uses? Example: a new issue programme rule (Example: climate change, Forest Development Agency, Forest Rights Act). How effective do you think the strategy is?
15. How do you get information about rules/regulations/programmes related to forestry?
16. Do you think NGO’s can play a role for improving the communication between Forest Department and community? Please elaborate.
17. Does knowing the local language or being from the same community give added advantage in communication?
18. Does personality of individual effect in communication?
19. Is there a desire for the forest department to improve communication with the community? If yes, what is the visible changes/evidence that such improvement is happening?
20. What is the communication strategy of the NGO with community and with forest department? Do you have a written document on the strategy? How much budget is allocated for such activities to you/at your level?
Questionnaire for Forest Department

1. Name:
2. Designation:
3. Organisation:
4. Place of posting:
5. Number of years of service:
6. Number of years of working in co-management areas:

7. What is your opinion about communication between the forest department and community in co-management? Is it going well, are there difficulties? Why?
8. Does communication differ over the period of co-management? Was it different before co-management agreement, and after co-management agreement? Are there any distinct events or phases when communication is high/low?
9. There are many aspects of co-management that need clarity between forest department and community. For example, the responsibility of each partner. Do you think these have been clearly communicated and understood by both partners?
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11. What is better, oral communication or written communication? What is more effective and clear when it comes to instances that require taking action by the forest department? Is there procedures developed for such situation? For example: permission for timber.
12. What methods can be used to increase the effectiveness of communication between forest department and community? Do you think new technologies like mobile phone, Internet are possible ways to communicate? Has there been any research or feedback on such methods?
13. Who in the forest department hierarchy do you think is the main contact with the community? In turn who in the community is the main contact for the forest department?
14. If general information that affects everyone in the village has to be communicated what strategy forest department uses? Example: a new issue programme rule (Example: climate change, Forest Development Agency, Forest Rights Act). How effective do you think the strategy is?
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16. Do you think NGO’s can play a role for improving the communication between Forest Department and community? Please elaborate.
17. Does knowing the local language or being from the same community give added advantage in communication?
18. Does personality of individual affect in communication?
19. Is there a desire for the forest department to improve communication with the community? If yes, what is the visible changes/evidence that such improvement is happening?
20. Do you have a written document on the Department’s communication strategy? How much budget is allocated for such activities to you at your level?
Communication in forest management in India
Questionnaire for senior forest officers from the Indian Forest Service

1. Name:
2. Designation:
3. State cadre:
4. Batch year:
5. Number of years of working in co-management (Joint Forest Management – JFM) areas:

Instructions: The general pattern of questions requires answers in the form of ratings, together with reasons for the ratings. When indicating how strongly you agree or disagree with a statement, please check the appropriate box. Please also give the reasons for your answers in the appropriate areas.

1. Please rate the statement: Communication has an important role in effective forest management.
   1. strongly disagree  2. disagree  3. undecided  4. agree  5. strongly agree

2. Please rate the statement: a. Communication with the public needs to be improved
   1. strongly disagree  2. disagree  3. undecided  4. agree  5. strongly agree
   b. If you agree, please give two or three reasons why you think communication with the public needs to be improved.
   1. ...........................................................................................................
   2. ...........................................................................................................
   3. ...........................................................................................................

3. In your view, who (which target groups) should be the focus of improved communication? Please name two or three key target groups that immediately come to mind.
   1. ...........................................................................................................
   2. ...........................................................................................................
   3. ...........................................................................................................

4. What topics do you think communications should focus on? Please name two or three key topics that immediately come to mind.
   1. ...........................................................................................................
   2. ...........................................................................................................
   3. ...........................................................................................................
5. How can communication most effectively be strengthened? Please name one or two particularly suitable ways that come to mind.

1. 

2. 

6. In your experience, what were particularly good examples of effective communication and why? Can you name one or two examples?

1. Example

2. Example...

7. What do you think are the biggest challenges to improving communication today? Please name two or three keywords that immediately come to mind.

1. 

2. 

3. 

Communications specific to Joint Forest Management

8. Please rate the statement: Communication between the department and community in Joint Forest Management program need to be improved.

1. strongly disagree [ ] 2. disagree [ ] 3. undecided [ ] 4. agree [ ] 5. strongly agree [ ]

b. If you agree with the statement, please give two or three reasons why communication between the forest department and community in the Joint Forest Management program needs to be improved.

1. 

2. 

3. 

9. In your view, who (which target groups) should be the focus of improved communication in Joint Forest Management? Please name two or three key target groups that immediately come to mind.

1. 

2. 

3. 


10. What topics do you think communication in Joint Forest Management should focus on? Please name two or three key topics that immediately come to mind.
1. 
2. 
3. 

11. How can communication in Joint Forest Management most effectively be strengthened? Please name one or two particularly suitable ways that come to mind.
1. 
2. 

12. In your experience, what were particularly good examples of effective communication in Joint Forest Management, and why? Can you name one or two examples?
1. 
2. 

13. What do you think are the biggest challenges to improving communication in Joint Forest Management today? Please name two or three key words that immediately come to mind.
1. 
2. 
3. 

14. a. Please rate the statement: After the JFM Agreement there has been an improvement in communication with the community.
   1. strongly disagree  2. disagree  3. undecided  4. agree  5. strongly agree

   b. If you agree, can you give two or three reasons why communication with the community improved after the JFM agreement?
1. 
2. 
3. 

15. a. Please rate the statement: The personality of the individual officer affects communication with community.
   1. strongly disagree  2. disagree  3. undecided  4. agree  5. strongly agree
10. What topics do you think communication in Joint Forest Management should focus on? Please name two or three key topics that immediately come to mind.

1. 

2. 

3. 

11. How can communication in Joint Forest Management most effectively be strengthened? Please name one or two particularly suitable ways that come to mind.

1. 

2. 

12. In your experience, what were particularly good examples of effective communication in Joint Forest Management, and why? Can you name one or two examples?

1. 

2. 

13. What do you think are the biggest challenges to improving communication in Joint Forest Management today? Please name two or three key words that immediately come to mind.

1. 

2. 

3. 

14. a. Please rate the statement: After the JFM Agreement there has been an improvement in communication with the community.

   1. strongly disagree  2. disagree  3. undecided  4. agree  5. strongly agree 

b. If you agree, can you give two or three reasons why communication with the community improved after the JFM agreement?

1. 

2. 

3. 

15. a. Please rate the statement: The personality of the individual officer affects communication with community.

   1. strongly disagree  2. disagree  3. undecided  4. agree  5. strongly agree
b. Could you give two or three examples about how an individual's personality could affect communication with the community?

1. 
2.  
3.  

16. Please rate the statement: The department looks at the personality of an individual officer (as a good communicator) when posting to JFM areas.

   1. strongly disagree □  2. disagree □  3. undecided □  4. agree □  5. strongly agree □

17. a. Please rate the statement: As a senior officer, I regularly receive feedback on issues that the communities face.

   1. strongly disagree □  2. disagree □  3. undecided □  4. agree □  5. strongly agree □

b. If you agree, what channels do you have for feedback? Can you give two or three communication channels that come to mind?

1. 
2.  
3.  

18. a. Please rate the statement: There is a need to simplify communications about rules and procedures.

   1. strongly disagree □  2. disagree □  3. undecided □  4. agree □  5. strongly agree □

b. If you agree, can you give two or three methods that would make it easier for a villager to directly access and be informed about rules and procedures?

1. 
2.  
3.  

19. Please rate the following statements:

a. Mobile (cellular) phones are a possible way to communicate with communities.

   1. strongly disagree □  2. disagree □  3. undecided □  4. agree □  5. strongly agree □

Comments, if any: .................................................................................................................................

b. Internet (website) is a possible way to communicate with communities.

   1. strongly disagree □  2. disagree □  3. undecided □  4. agree □  5. strongly agree □

Comments, if any: .................................................................................................................................
20. Who (what designation) in the forest department hierarchy do you think is the main contact for the community in the field? Please tick only one.

1. Deputy Conservator of Forests  2. Assistant Conservator of Forests  3. Range Forest Officer

21. Please rate the statement: It is important to build relationships through regular community meetings.

1. strongly disagree  2. disagree  3. undecided  4. agree  5. strongly agree

22. Please rate the statement: a) As a senior officer, I often get the opportunity to have meetings with JFM village communities.

1. strongly disagree  2. disagree  3. undecided  4. agree  5. strongly agree

b) When was the last time that you had a meeting with a JFM village community?
1. Month  2. Year  3. Village name

23. a. Does your state forest department have a communication strategy?

1. No  2. Yes

b. If yes, when was it formulated? Year

24. a. Please rate the statement: NGOs have a role in improving communication between the Forest Department and communities.

1. strongly disagree  2. disagree  3. undecided  4. agree  5. strongly agree

b. Please give 2-3 reasons for your choice

1. 
2. 
3. 

25. We would like to know your opinion of the Forest Department at the field level. Please rate the statements:

a. The forest department is very transparent

1. strongly disagree  2. disagree  3. undecided  4. agree  5. strongly agree

b. Please give a reason for your choice


2a. The forest department is like the police department

1. strongly disagree  2. disagree  3. undecided  4. agree  5. strongly agree

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d. Please give a reason for your choice

...............................................................................................................................................

e. The forest department listens to the community.

  1. strongly disagree □  2. disagree □  3. undecided □  4. agree □  5. strongly agree □

f. Please give a reason for your choice

...............................................................................................................................................

g. It is easy to communicate with the forest department.

  1. strongly disagree □  2. disagree □  3. undecided □  4. agree □  5. strongly agree □

h. Please give a reason for your choice

...............................................................................................................................................

i. The forest department informs the community about various schemes

  1. strongly disagree □  2. disagree □  3. undecided □  4. agree □  5. strongly agree □

j. Please give a reason for your choice

...............................................................................................................................................

Thank you for your time.