Administrative Behavior in Forest Governance Reform in India: A Preliminary Report on Case Studies from Maharashtra & Andhra Pradesh

Forrest D. Fleischman[1]

Abstract:

This paper reports preliminary results from a study of administrative behavior in the implementation of forest governance reforms in Maharashtra and Andhra Pradesh. The focus here is on evidence collected between August and October, 2010 from fieldwork in the Vidarbha region of Maharashtra. I begin with an examination of the organization of the Forest Department in the region, and continue with an examination of how this organization effects policy implementation. I find qualitative differences in the kinds of interaction accompanying different policies and policy reforms. Policies that are implemented effectively empower powerful and competent actors to do things that are in their interest. This includes many of the policy changes that were required by the Supreme Court as part of the Godavarman Case. By contrast, many of the policy changes required as part of Joint Forest Management and the Forest Rights Act were not implemented effectively, since there was no empowered constituency for these changes at the local level.

Key Words:

Administrative Behavior, Maharashtra, Andhra Pradesh, Joint Forest Management, Godavarman Case, Forest Rights Act

1: INTRODUCTION & STATEMENT OF THE RESEARCH PROBLEM

There is now a huge literature spanning several disciplines that addresses the problems of commons governance. This literature has made great strides in understanding when people can come together to solve collective action problems, but it has done less well in explaining why government attempts to foster new collective action at the local level so often fail to meet their goals. I believe this is because of two common limitations of common research. First, literature written as policy advice tends to give prescriptive statements about what needs to be done, without addressing two essential questions: Who will do it and how will they do it? Second, literature in the commons research tradition tends to take communities and local resource systems as the primary unit of analysis, taking for granted the larger social contexts that shape local-level responses.

This paper has an empirical focus on the group of social actors who are most commonly responsible for implementing policies: employees of public agencies tasked with environmental governance. These are also the actors who most commonly shape the local contexts of natural resource management.

The first question I ask in this paper is: What are the mechanisms, practices, and technologies utilized in the implementation of governance reforms in the management of forests by government agencies? This question is necessarily a matter of what King, Keohane & Verba (1994) would call descriptive inference. My goal here is to describe, a necessary prelude to the process of theory-building. I draw on a case study of the Forest Department in Maharashtra state, India. The second question is of a more theoretical nature: how do these practices influence the way government policies are implemented? This paper is based on ongoing fieldwork in Maharashtra, so the conclusions drawn here should be seen as tentative or preliminary – in many cases I will report suggestions, impressions, and preliminary inferences. By the time of the IASC conference in January, I will also have begun a comparative case study in the neighboring state of Andhra Pradesh, and I plan to include this comparison in my presentation there. Since fieldwork in Andhra Pradesh will not begin until November 2010, this information cannot be included here. I hope my readers will be forgiving of my errors and free with their feedback, as this is very much a study in progress, and I intend to continue collecting data through the first several months of 2011.

The importance of this research lies both in its direct empirical relevance and in its contribution to theoretical development. Maharashtra state is roughly comparable in population and land area to the country of Germany. According to the most recent reports, Maharashtra has the 3rd largest quantity of legally designated forest land in India, 61,939 km^2 or 8% of all of India's government forest land, and the 4th largest area covered by forest, with 50,650 km^2 (Forest Survey of India 2009).[2] This large forest area provides important sustenance to millions of poor people in the form of non-timber forest products, and is also an important provider of ecosystem services including watershed protection, carbon storage, and biodiversity protection. It includes areas which produce exceptionally high quality teak timber. At least according to some authors, improved management of these forests could provide much better livelihood options to forest dependent peoples (Milne, Verardo, and Gupta 2005), and could also substantially improve the provision of certain ecosystem services.

Theoretically, this paper aims to contribute to a larger project of theoretical development. This study is part of a larger project which seeks to develop a theoretical basis for understanding the actions of government agencies in natural resource management (Arnold and Fleischman 2010). A single case study cannot be used to prove or disprove a general nomothetic theory (King, Keohane, and Verba 1994),

---

[2] It is important to distinguish between areas legally designated as forest department land (which may or may not contain forest vegetation, forest being in this case a legal category), and areas which contain tree cover sufficient to be classified as forest from a biological standpoint (which in this part of India are located almost exclusively on government forest land). Estimates from the Forest Survey of India are the best available – but it should be noted that there is considerable controversy in parts of Maharashtra about the legal status of some government lands, so the legal estimates may not be entirely reliable.

however it can contribute to an understanding of causal processes (Brady and Collier 2004) and can help develop typological theories that specify the conditions under which certain relationships hold true (George and Bennett 2005).

A theoretical understanding of government agencies in natural resource management is important because although the behavior of public agencies has not been a traditional focus of commons research, they remain powerful in commons governance, and thus, attempts to either improve their performance or transfer their powers to other actors are at the core of most natural resource policy reforms. In the forest sector, estimates for statutory government ownership range from 74% (Sunderlin, Hatcher, and Liddle 2008) to 86% (Agrawal, Chhatre, and Hardin 2008) worldwide. In India, 91% of forests are owned by the national government, and 7% are owned by state and local governments (FAO 2005). Studies that compare the effectiveness of government, private, and local or communal tenures consistently describe efficiency advantages for locally managed irrigation systems (Lam and Ostrom 2010; Ostrom 1992), however attempts to transfer the management of centrally governed irrigation systems to local users have not been as successful as hoped (Theesfeld 2008; Vermillion 2006, 1997; Theesfeld 2004). In forest governance, where local users often cannot capture all of the benefits and costs, studies comparing the effectiveness of different tenure systems have found no significant differences in effectiveness between government, private, and community (Coleman 2009; Gibson, Williams, and Ostrom 2005; Ostrom and Nagendra 2007; Tucker 2010). Instead, the existence of monitoring by local users, regardless of tenure, has been found to be most important. While governments can assist such local monitoring, they can also inhibit it through policies that prevent local self-organization or that sap local user motivations (Cardenas, Stranlund, and Willis 2000). Because monitoring by local users has been found to be particularly important, I will focus here in particular on programs in which the Forest Department attempts to involve local users.

2. THEORETICAL FRAMEWORK

 This paper is a part of a larger project which aims to develop a theoretical framework for understanding and analyzing government involvement in natural resource governance. Those interested in this larger project should examine our paper presented at the North America IASC meetings in October 2010 (Arnold and Fleischman 2010). I will focus here on those aspects of this developing framework most relevant to this research – those interested can ask me to share the full paper. The framework builds on the Institutional Analysis and Development (IAD) Framework developed at Indiana University (Aligica and Boettke 2009; Ostrom 2005), adding insights from the broader public administration and policy implementation literatures.

2.1 Institutions & Organizations

To begin with, the focus here is on the behavior of actors within a certain kind of organization: a public agency that manages natural resources- in this case, forests. There is much confusion about the relationship between the concepts of institutions and organizations. We draw on North's (1990) definition: Institutions are the "rules of the game," while organizations are the players, however we conceive of institutions more broadly than North, to consist of rules, norms, and strategies (Crawford and Ostrom

1995; Ostrom 2005). This is a deceptively simple definition. How do we know if a collection of people are working together as an organization – a single player? There are two interlinked ways to answer this question.

The first answer draws on Weber, who described organizations as "a system of continued purposive activity of a specified kind" and "a 'corporation organization' is an associative social relationship characterized by an administrative staff devoted to such continued purposive activity."(Weber 1947, 151). This definition requires a judgment to be made: is the group of people sufficiently cohesive and purposive to be analyzed as an organization?

The second answer helps the analyst to answer the first by focusing on the analyst's research questions: is it useful to analyze a group of people as a corporate actor or is it useful to analyze them as a series of interacting individuals? For it to be useful to see them as corporate actors, their behavior must be sufficiently cohesive for this to make sense, but we must also have research questions that can be answered by cohesive analysis. When we talk about national politics, particularly in parliamentary systems, it is usually possible to describe the positions of a political party or a ministry, without worrying about the individual actors within that party or ministry. On the other hand, if we want to understand why that party took a certain position it will be necessary to examine the actions and motivations of individual actors within the organization.

In order to understand the actions and motivations of individual actors within an organization, we will need to take a different view of an organization. The organization is no longer the player of an institutional game. It is now an action situation. An action situation is an analytic device used in the IAD framework to delimit the space in which actors make decisions and analyze the results of those decisions. As such it is a space ordered by institutions which define actors' capabilities and incentives.

This view of institutions and organizations is essentially one of nested action situations. An analyst is responsible for choosing to focus on that action situation which his or her research question. A national government is an organization which interacts with other national governments in the international arena.   A political party or a ministry is a subcomponent of that organization, which must be analyzed as an organization to understand the political decisions made at the national level. A national constitution and various other laws and practices will constrain the actions of these players. At a lower level, a government ministry may be composed of high level bureaucrats and various sub-departments. These actors, again, will interact within a framework of civil service rules, the various laws they are responsible for maintaining, and the cultural practices of the society they live in. The chain moves downward – in India there are important action arenas at the state and district levels, as well as at the village level where most of the targets of policies are located.

2.2 Policy Implementation

This paper is about the implementation of policies in the Lasswellian sense of the term: in which policy "is a social process of authoritative decision making by which the members of a community clarify and secure their common interests." (Clark 2002) This

use of the term differs from the common use of the term in Indian public administration, in which a policy is seen as a directive statement of principles by high level government officials which is aimed to guide the legislative and executive branches in their design of laws and programs. This broad definition of policy allows us to consider the fact that policies may be made in multiple, nested action situations. An Act passed by Parliament, such as the Forest Rights Act of 2006, is a policy decision which creates a set of rules and procedures by which a set of actors subordinate to the will of Parliament will behave: a national level committee will draft a set of rules. Local-level bodies will be constituted to review the forest rights claims of individual claimants. These claims will then be reviewed by higher level officials, and sanctioned as per prescribed procedures. At the same time, at each of these levels, actors will have substantial discretion to make decisions that will affect outcomes. As an example, a district in which the Collector or other senior officials invest substantial energy in informing the public about the Forest Rights claims process will have a very different outcome to one in which senior officials are indifferent to the process and make little effort to share information.

It is worth noting that the Lasswellian definition's emphasis on community does not mean that decisions are the result of harmonious processes, or reflect the interests of all actors. Policies are authoritative decisions, but not all actors have equal access to the arenas of power. For example, in many parts of India, women are excluded from local-level decision-making. The village decision-makers may make authoritative decisions that reflect their interests – but if they are all male, they are likely to ignore the interests of a substantial portion of the village community.

During the 1980s, studies of the policy implementation process in the US & Europe focused on a debate between those who applied a top-down versus a bottom-up methodology (Sabatier 1986; Matland 1995). Top-downers emphasized the extent to which local actions mirrored the intent of central policy designers, while bottom-uppers emphasized the ways in which local actors reinterpreted policies to meet local needs. Subsequent literature have emphasized the complementarities between these opposing viewpoints. Administrative discretion is inherent to the set-up of administrative systems because supervisory power is limited (Miller 1992; Williamson 1985; Miller 2005). What we want to understand is how incentives are structured to mediate between the setting of broad-level priorities and the actions of implementing officials. In order to understand this, we will need to understand the lives and work of these implementing officials. This is the question we now turn to.

3. METHODS

As described in the introduction, this paper aims to understand the process of policy implementation in the Indian Forest Department through an ethnographic comparative case study approach. In creating the design for this study, I relied heavily on Kaufman's (1960) classic study of the US Forest Service. Like Kaufman, I plan to visit several administrative units, as well as the headquarters, and through interviews, observations, and government documents, develop an understanding of the process of policy implementation. Since I am neither as smart nor as insightful as Kaufman, I intend to spend more than the single week he reports spending in each location. Hopefully this will also protect me from the kinds of major oversights committed by Kaufman, who

seems to have completely missed the fact that the US Forest Service was largely a political captive of the timber industry (O'Toole 1988; Clary 1986).

I visited the study region in June and July, 2009, and have been residing in the region since August 2010. Two visits to Delhi, in August 2009 and July 2010, have also helped to gather evidence at the national level. This is a progress report of an ongoing study. At the time of writing, I have visited the districts of Nagpur, Gondia, and Chandrapur. I intend to visit at least one other district in Vidarbha, spend more time in all of the aforementioned districts, and repeat the same work in the neighboring Telangana region of Andhra Pradesh prior to completing this study. In this paper, three primary sources of evidence will be used:

1. Government Documents. These documents have been gathered from all available sources. Most national and some state documents are available on the internet. Remaining documents at the state and district level have been gathered directly from government offices in Vidarbha, including the office of the Principle Chief Conservator of Forests in Nagpur, as well as Circle, District and Range forest offices and the offices of the District collector. Documents meant for inter-state communication are in English, as are documents such as the Working Plans, annual reports prepared at the state level, and various evaluation reports. By contrast, documents intended only for local circulation – including micro-plans prepared for JFM exercises & most local communications and reports – are only available in Marathi. Since I do not read Marathi, I have had these read to me by a person fluent in both this language and English, and have had them translated if more detailed analysis is necessary.

2. Interviews. Interviews have been conducted with a broad array of stakeholders at the national, state, and district levels, but since the focus of this paper is on policy implementation at more local levels, the focus of these interviews have been at the district level: in each district that I have visited I have begun my interviews by meeting with the head forest official in that district. Depending on the amount of forest in a district, this may be either the Chief Conservator or Conservator of Forests for a Circle, or the Divisional Forest Officer.[3] I have used a snowball sampling technique to locate other forest officials – including those serving in specialized units (i.e. Working Plan, Evaluation, etc) and those serving at subordinate positions in the territorial division (i.e. Assistant Conservator of Forests, Range Forest Officer, Forrester) – as well as to locate other stakeholders including NGOs, political figures, business people, and local villagers.

---

[3] Circles are the Forest Department's level of administration below state. Divisions are subordinate to circles. While many districts are contiguous with a single forest division, heavily forested districts may have as many as 6 forest divisions, usually under the supervision of a single circle. A circle is headed by a senior officer at the rank of Conservator or Chief Conservator of Forests: generally an IFS officer with a minimum of 14 years experience. A division is usually headed by either a Deputy Conservator – an IFS officer with less than 14 years experience – or a Divisional Forest Officer- a senior member of the State Forest Service. The system of ranks and promotions will be explained in more detail further on in this paper

3. Observations. I have had the opportunity to observe the behavior of forest department staff conducting their everyday work. This has been partially a byproduct of conducting interviews – which often occur while other work is being attended to – and also a byproduct of my accompanying the officers on their regular work. These opportunities have so far been somewhat limited, but they have allowed me to develop a sense of the working dynamics actually at play in departmental functioning.

Consonant with the qualitative, descriptive approach adopted here, daily field notes were taken on interviews (which were not recorded) and observations. The NVivo 8 software package has been used to help organize and code these notes.

4. THE CONTEXT: VIDARBHA

4.1 Regional Context

The focus of this study is on the eastern third of the state of Maharashtra, known as Vidarbha. The regional capital is the city of Nagpur and is a rapidly growing industrialized city of 3 million with a strategic location at the dead center of the Indian subcontinent.   The region experiences 3 main seasons – a 3-4 month rainy season that lasts from June-September, a relatively cool season from October-February, and a hot dry season which lasts from March until the onset of the monsoon in June. Average daytime highs in April and May top 45 C. Rainfall increases from the western part of the region, which is droughty and receives 800-1000 mm/year, to the east, where many areas receive over 1500mm/year. Nearly all of the rainfall occurs during the monsoon season. The forests of the region are tropical dry deciduous forests, with commercially valuable teak (*Tectona grandis)* being one of the most common species. Forests are concentrated in hilly areas, while the fertile lowlands have primarily been converted to agriculture. Irrigation is limited and agriculture is predominantly rainfed. Forest products provide important supplementary sources of income, particularly for the large population of scheduled tribes living in forest fringe areas, whose only sources of income during the dry summer months may come from the gathering of tendu (*Diospyros melanoxylon*) leaves which are used to roll cigarettes.

4.2 Historical Context

The rise of the modern system of forest governance in India can be traced to the arrival of railroads in the mid 19th century, which resulted in a boom in timber demand for fuel & sleepers, and also enabled the large scale movement of timber from forested tracts in remote areas towards urban and export markets. This coincided with the consolidation of the British Administrative unit called the Central Provinces, with its capital at Nagpur, in what is now Maharashtra state. As is well documented in the historical work of Rangarajan (1996), the British government was divided over the use of forest resources: the conversion of forest to agriculture was encouraged in order to increase the revenues of the colonial state, while at the same time, a desire to control revenue from forest exploitation combined with a concern over the conservation of timber supplies to contribute to the imposition of increasingly restrictive governance of existing forest resources. Thus, the colonial government simultaneously selected areas to

convert to agriculture, encouraged settlements in forests so that labor would be readily available to harvest timber, and enacted policies that restricted uses of forest land so that emphasis could be given to the production of timber – particularly the valuable teak which grew well in the region.

Forest legislation passed by the British Colonial Government, culminating in the 1927 Indian Forest Act (still in effect), designated two primary types of forest lands. In Reserved Forests, the rights of local inhabitants to use the forest would be surveyed and then eliminated, with compensation paid to the users. In actual practice, such forest rights settlements rarely documented the full extent of local uses. Large numbers of people living in or near forests grazed their cattle, cut small or large timber and bamboo, hunted animals, and collected various other products from the forest for subsistence or commercial uses. The Forest Department would manage Reserved Forests for the production of timber & other revenue, but could allow other uses on the land as per its discretion. In Protected Forests, by contrast, local users would maintain their *nistar* rights to use various products from the forest for subsistence use. These rights were supposed to be recorded by village level administration, but again, this process did not record all existing customary rights.

The designation of reserved and protected forest meant that the word forest now had two meanings in central India: land covered with growth of trees, and land legally designated as forest, regardless of its cover. This is an important point to clarify. Land that is legally designated as forest does not necessarily have forest cover, nor can it be assumed that it had forest cover historically, as forest is used as an administrative term.

While Independence did not bring significant changes in forest policy or law in Central India, it did lead to a dramatic increase in the amount of land legally designated forest. The British had governed large parts of the Central Provinces through landlords who retained control over forested land. According to Rangarajan (1996), these landlords used their forest lands more intensively than those administered directly by the British. Thus, the forests had been harvested more heavily, and more rights were granted to local forest users. The government of Independent India abolished these landlord estates. While tenant farmers were granted ownership rights of the land they tilled, the remaining land was turned over to the Forest Department (if it contained forest cover), or to the Revenue Department (in the case of grazing or shrub lands). This led to a dramatic and hurried enlargement of the forest estate, and it is not clear if the rights settlement was completed on these lands.

In 1960, the state of Maharashtra was formed out of the Marathi-speaking areas of the old Bombay Presidency, the Central Provinces, and Hyderabad. The area formerly belonging to the Central Provinces, known as Vidarbha, contains much of the state's forest, and the regional capital of Nagpur is also the administrative center for forest management in Maharashtra. Given the vast size of the state (approximately equal in population and area to Germany), Nagpur has maintained its importance as a regional hub of government and commerce even after losing its state capital status in 1960. My focus here is exclusively on the Vidarbha region.

Aside from these changes, little changed in forest administration in the region with independence. The administrative structure of the forest department underwent no significant changes, although it now answered to an elected state government. National and state level forest policies continued to emphasize timber production for meeting industrial needs.

However, change was occurring in other areas. Population growth, economic growth, and improved transportation meant that there was increasing pressure on forest resources. Although in theory reserved forests were to meet national needs, in practice the forest department largely lacked the capacity to enforce their enclosure of the forest commons. Since local users usually had little stake in forest governance, the result was a situation of de-facto open access. While the Forest Department continued to harvest bamboo and teak for industrial use based on sustained yield models, heavy grazing pressure and high levels of local demand meant that the forest regeneration built into the models frequently failed to occur. The Forest Department's own Working Plans document widespread failure to regenerate forest cover, and a resulting decline in forest cover and quality.

The first comprehensive attempt to address these issues in Vidarbha was the USAID funded Social Forestry project (Misra and Bhatty 1990). This project aimed to address a perceived crisis in the availability of fuelwood by planting fuelwood producing trees outside of forest areas. The project achieved significant success in encouraging horticulture in parts of western Maharashtra which were well-suited for plantations of fruit-producing trees. By contrast, in Vidarbha, the attempts to encourage the planting of timber and fuelwood trees on private lands and village common lands were largely unsuccessful. According to the USAID review of the project (Misra and Bhatty 1990), people who were meeting their fuelwood needs for free from the open-access forests were not interested in devoting labor to growing fuelwood on other lands which were perceived to be valuable for their agricultural or grazing production.

5. The Organization of the Forest Department

I examine the organization of the Forest Department in 2 ways: first, I examine the personnel system: what are the incentives seen by individual forest officials as they move through their career? Second, I examine how this system plays out spatially: how does the personnel system relate to the management of land? This second section is divided into two sub-parts: I first look at the spatial organization of personnel, and then at the spatial organization of planning.

5.1 Personnel Systems and motivations

The Maharashtra Forest Department has approximately 17,500 employees, of which 13,500 are in line posts carrying governmental authority, and 4,000 are in various support positions, as clerks, accountants, drivers, peons, guards, etc (Office of the Chief Forest Statistician 2009). This does not include the large number of laborers who perform work for the department on a temporary basis as wage laborers. Of the 13,500 officers in line posts, approximately 9000 are forest guards, 3000 are foresters, 1000 are range forest officers, and 500 are in more senior posts. A forest guard is

responsible for a beat – a relatively small area that is in theory patrollable on foot (although in practice today most patrolling is done on the guard's personal motorcycle). He is supervised by a forester who controls a section consisting of 3-4 beats. A posting as guard requires a 10th grade education. A forester may be a promoted guard, but foresters are also hired directly with 12th grade education. Foresters are supervised by range forest officers. In theory foresters can be promoted to range officers, but all range forest officers that I have met were hired directly through competitive civil service exams at the state level, which require a college degree. They are part of the Maharashtra Forest Service. Higher level posts are filled by a combination of promotions from the ranks of the Maharashtra Forest Service, and direct entry from the Indian Forest Service.

The Indian Forest Service is an elite cadre of officers selected through the highly competitive Union Public Service Examination. After training at the Indira Gandhi National Forest Academy, they are assigned to state cadres, where they serve most of their career. IFS officers begin their career as Assistant Conservator of Forests (ACF), the rank above Range Forest Officer, and quickly advance to become Deputy Conservator of Forests (DCF) (most ACFs are promoted RFOs). DCFs are responsible for supervising a territorial division – an area that may contain 6-10 ranges, and may be contiguous with a District, or may be a sub-part of a heavily forested district. RFOs promoted to this rank are usually called Divisional Forest Officers (DFO) and not DCFs, however in Maharashtra very few of these posts are held by promotees. After 14 years of service, they are promoted to the rank of Conservator of Forest, and thence to Chief Conservator and Additional Principal Chief Conservator. The Head of the department is the Principle Chief Conservator/Head of Forest Force, while the head of wildlife activities is the Principle Chief Conservator/Chief Wildlife Warden. The PCCF is himself supervised by the secretary of the environment and forests ministry, an officer from the Indian Administrative Service, and by the forest minister.

While I have described all of these postings in terms of their territorial role, there are also various other roles filled by RFO, ACF, and DCF level officers in the administration – including specialized posts in evaluation, planning, as well as various mobile squads responsible for enforcement.

A comparison with previous annual reports dating back to 1992-1993 indicates two changes in this staff strength. First, the number of guards, foresters, and range officers was modestly higher in the 1990s, and declined at the end of the World Bank project in 2000. In the last couple of years, staff strength at these levels has increased, to close to 1990s levels. Second, the number of officers in the most senior posts has increased dramatically: In 1992 there were 6 CCFs and 25 CFs. These numbers remained flat through the 1990s, but have expanded dramatically in the last decade. In 2008-9 there were 22 CCFs and 47 CFs.

It is obvious from the numbers given above that in such a highly pyramidal bureaucracy, opportunities for promotion are limited. Officers enter the department at every rank below DCF – as guards, foresters, rangers, and ACFs, which further limits upward mobility. If there is a need for a new forester, a guard may be promoted, or a new hire may be made at the rank of forester. The result is a widespread feeling of stagnation.

Older officers frequently report that they have spent their entire career at the same rank. A forester I met had served 30 years as a guard before being promoted to forester one year before retirement. Similarly, a CCF reported to me that while he has not been promoted to APCCF, members of his IFS cohort serving in other states have been. As a result, when he goes to national meetings, other members of his cohort are driven in better quality cars and stay in higher quality hotels. Although these may seem like trivial details to an outsider, it was obvious to me by the way this officer narrated these facts that he was very troubled by them.

Officers in the Maharashtra Forest Service and Indian Forest Service, are covered by assured career progression: regardless of the availability of posting at higher ranks, they will receive the higher pay reflective of that post after a certain number of years. Although there are annual performance reports filed by superior officers, most officers report that these have little bearing on promotions unless they report exceptionally bad results.

The difference in pay between the lowest and highest level officials are not exceptionally large, but the difference in status and perks are. The PCCF receives a salary of rs. 80000/month (approximately $1750), while a forest guard's salary is about rs. 10000/month (approximately $250). However, higher level officers stay in large government-owned bungalows near their offices in major cities (a senior officer in Nagpur estimated that to rent an equivalent house in the private market would cost rs. 60-70000/month – approximately equal to his salary). They have access to government cars and drivers, servants, and peons, all of which I have regularly observed performing personal duties (as an example, one day I observed a DCF giving his wife's kitchen mixer to his driver to take it to be repaired). Senior officers are treated as important and powerful members of the communities in which they live. Although older officers report a decline in their status, I have observed that it is still the case that the DCF is a VIP in his division, and is treated with the highest levels of respect and courtesy. Senior officers also have opportunities to travel regularly for education and training. Many senior officers, for example, report to me that they have visited major American research universities to take training seminars. It is also widely reported that officers receive additional income from bribes, but it is not clear how this is distributed through the hierarchy, nor how much money it is in total. It is likely that the amount of bribery-based income available varies substantially by posting within a given rank.

It appears that instead of income and promotion, the primary manipulable aspect of an officers' job, and therefore a major area where incentives can be based, lies in transfers. This is highly consistent with other work on the Indian bureaucracy (Zwart 1994; Potter 1987, 1988, 1996; Wade 1982, 1985; Banik 2001; Iyer and Mani 2008; van Gool 2008), which finds that the manipulation of transfers is the primary means of political control of the bureaucracy. Different postings vary in their desireability in several ways. Certain areas of the state are more desireable to live in than others. Officers generally prefer to serve near to home than far away, and this is an important consideration in such a large state. Certain areas of the state are known for having particularly harsh climates or low levels of social development. The eastern border of the state (Gadchiroli & Gondia districts) are affected by a violent Maoist insurgency,

although officers who have served in these areas recently downplay the threat the resulting violence poses to daily life.[4] Within regions, postings near urban areas allow officers to access services – the most frequently mentioned being good schools. Due to the growth of district towns, this is no longer such an important issue for higher-level officials – IFS officers are likely to spend nearly all of their careers based in towns with substantial infrastructure, high quality schools, etc. Range Forest Officers, foresters, and beat guards, however, are likely to spend most of their careers posted in more remote areas. Some keep their family in nearby towns, and visit them only on holidays. Finally, some postings are likely to offer substantial more opportunities for earning money or for making good political connections, although my research has not yet given me insight into what these factors might be.

One difference between this case and those reported in the literature is that Maharashtra has, since 2005, an effectively enforced law that limits the extent of transfers (General Administration Department 2006). Potter and Zwart report that the average tenure of senior civil servants in any given post was less than 1 year, however nearly all interviewed officials in Maharashtra expect to be transferred only after serving a 3 year term, and report tenures in the recent past of 3 years. Zwart predicted that it would be very difficult for a political regime to enforce limits on transfers, however this appears to have been done effectively in Maharashtra. While senior officers are concerned that the lack of easy transfers makes it more difficult to discipline subordinates, it is apparent that most officers are happy with the new system.

There is now a substantial body of research in the US demonstrating that civil servants tend to be public-spirited individuals who do their work because they wish to help society, and not merely because of the pecuniary rewards (Brehm and Gates 1997; Goodsell 2004; Perry and Wise 1990; Perry and Hondeghem 2008). I have not found analogous research from India. Although newspaper columnists decry corrupt and incompetent bureaucrats, interviews with officials themselves reveals that many find great rewards in their jobs. Many (though certainly not all) officials show an obvious passion for forests and for improving the lives of people who are dependent on forests. Forest officers at all levels are highly respected members of their communities, and stable earnings continue to make the jobs appealing even as greater opportunities open in the private sector.

One of the major factors that Kaufman (1960) credited with forming the political unity of the US Forest Service was the uniformity in educational backgrounds of its officers, who were trained at a relatively small number of forestry schools. The Indian system takes this farther: officer training in forestry occurs not in independent schools and universities, but in training institutes run by the Forest Department, in which senior forest officers (and not forestry professors) are the primary teachers. Training exerts a strong influence on forest officials. A probable difference between the department studied by Kaufman in the US and the one we are discussing here is that a large percentage of Indian forest officials have no particular prior interest and training. As one retired IFS officer told me, "people like me, coming from urban environments… I

---

[4] They report that the rebels never bother forest officials, although this appears to be a change from an earlier period.

think I saw a forest first only after joining the Forest Department." By contrast, many lower level officials join the department because it is one of only a very small number of salaried jobs available in their village.

The training these officers receive in their respective training institutes imparts them with certain ideas about forests. Forest professionals are made part of a professional community with certain shared values and concerns. Forests with large trees and healthy wildlife populations are valued as "good forests." Foresters look back to a bygone era of "scientific forest management," when Indian forestry was a world-leading exemplar of a rational approach to managing trees for maximum sustained yield for industrial use. Foresters are also trained in human-environment interactions, and in post-1988 policies which put meeting the needs of people & wildlife conservation prior to producing timber, but these are given considerably less emphasis. Out of 735 points awarded on the theoretical exams at the Indira Gandhi National Forest Academy (where IFS officers are trained) wildlife and "forests and people" count for 35 points each, while silviculture and forest mensuration count for 150 points (Government of India 2007).

5.2 Spatial Organisation

The Forest Department has several branches. Forest areas that are not protected areas (i.e. wildlife sanctuaries, national parks) are administered by the territorial wing, which includes the bulk of the land and forest staff in the state. In Maharashtra, administration of all protected areas is lodged with a separate wildlife wing. A parastatal company, the Maharashtra Forest Development Corporation controls a relatively small area of high quality teak and bamboo plantations which are managed for production. Although the wildlife wing and the MFDC have separate staffs in each region that they work, there are no specialists – officers at all levels are freely transferred between these three units of territorial administration. Relatively small specialized units handle social forestry, planning, and other minor activities.

The basic unit of forest administration in India is called a compartment. A compartment is a patch of government-owned land controlled by the Forest Department with a relatively uniform set of vegetation and soil. A typical compartment is 40-100 HA. Compartment maps are not yet digitized (there are few computers in offices below the division level), but exist as paper in the range office. Several compartments form a coupe. Administratively, a group of compartments comprise a forest beat, which is monitored by a beat guard. The guard is responsible for patrolling his[5] beat for illegal timber felling, grazing, collection of produce, and hunting. He is also responsible for supervising any work that is being done on his beat. The guard's immediate supervisor is a forester, whose responsibilities are similar to those of a guard. He is in charge of a section, which consists of 3-4 beats, and is granted a higher level of responsibility in dealing with planning. Guards and foresters can be transferred anywhere within the circle they were hired, but are not generally transferred to other parts of the state.

---

[5] I have yet to meet a female forest guard – or for that matter, a woman working in any capacity in the Maharashtra Forest Department other than office clerk or peon.

A huge percentage of these officer's work is taken up with forest protection: preventing unpermitted harvesting of trees, fuelwood, NTFPs, fodder, and wildlife. Corruption in the local level enforcement of forest protection is widely reported (Robbins 2000). As the street-level core of the department, guards and foresters are caught between their responsibilities as employees and the necessity of maintaining their position in communities where theft of forest products may be essential to livelihoods (Vasan 2002). This may explain why a senior official told me that the prime reason that the forest department is unable to protect forest resources from illegal uses is that the guards simply do not communicate with their superiors. In fairness to these officers, it is also worth pointing out that their job is overwhelming: forest resources are scarce and the pressures on them are tremendous. Forest guards are poorly paid, unarmed, and their only transportation is their personal motorcycle.

The Range Forest Officer is, according to one senior official, the backbone of the department. The officer's range consists of several sections. RFOs are typically college educated members of the Maharashtra Forest Service. Their offices are typically located in the taluka[6] headquarters, where they may be one of only a small number of educated men, and thus play a prominent role in the local society. Range headquarters are substantial buildings. Most have at least a clerk and accountant working for them, and ranges which have particularly large forest protection responsibilities sometimes have their own vehicles. The RFO is responsible for most financial management, and also must approve most location specific plans – for example, the RFO is supposed to mark all trees for felling, although in practice I'm told that he usually works with the local forester to do this. Since documents such as the Working Plan and many central laws and policies are in English, which the high school educated foresters and guards may have difficulty reading, the RFO is responsible for translating these policy directions into practice.

Several ranges form a forest division. Each division is headed by a Deputy Conservator of Forests, assisted by three or four Assistant Conservators. The DCF office is a substantial building or collection of buildings in the district headquarters, or, in the case of a heavily forested district such as Chandrapur, in a taluka town. The DCF oversees an office staff of perhaps 15-20 clerks, accountants, and functional officers. He usually has his own vehicle, and his office may have several other vehicles which are used by the ACFs or mobile squads that work with the RFOs on major protection operations. He has a computer connected to the internet, as may several of his clerks. The DCF, as the highest level forest department official in an area, has a status that approaches that of the collector/district magistrate, the highest level government official in the district. It is worth noting here that the DCF is formally subordinate to the Collector, however particularly in heavily forested districts, the forest department enjoys substantially more independence from the revenue department (headed by the collector) than officers of other departments.

---

[6] India's basic units of local administration are the district, the taluk (or block), and the gram panchayat (or village). District capitals in Maharashtra are typically urbanizing towns or small cities, while the taluka towns are typically much smaller. Most panchayats in Maharashtra include several spatially distinct villages.

Supervising the DCF is a Conservator of Forests or Chief Conservator of Forests located in the circle headquarters. Maharashtra has 11 territorial circles, each with 3-5 divisions. Heavily forested Chandrapur District is a single circle, with 3 divisions, while the Nagpur circle covers four divisions, each contiguous with a district (Gondia, Bhandara, Nagpur, Wardha). There is also a working plan office located in each circle, which is also headed by a conservator of forests, who is responsible for revising the working plans for each division on a 10 year cycle. These offices are likely to contain specialists not available at lower levels – for example, all working plan offices now have surveyors trained in the use of GIS and remote sensing software.

At the highest levels of administration, there are a number of specialized units, focusing on human resources development and management, evauation, production, research, public relations, etc. While these units are based in the head office in Nagpur, many also have staff at the CF or DCF level working in various field offices throughout the state, as well as in other major administrative centers (eg. Pune, Mumbai). Senior forest officers are often sent on deputation to other departments within the state or in Delhi – for example, the current director of the Tribal Research and Training Institute in Pune, the nodal agency for implementing the Forest Rights Act, is a CCF on deputation.

5.3 Spatial Planning

Academic literature on forest governance in India has largely ignored the technology that Forest Department officials consistently name as their most important tool: The Working Plan. There are three possible reasons for this. First, working plans are not considered public documents.[7] I was specifically told by a working plan conservator that the working plan documents were "for departmental purposes only," and were not to be shared publicly. Legally, under the 2005 Right to Information Act, these documents are now supposed to be publicly available, but it appears that this is not widely practiced. Second, it is possible that changes in national supervision of working plans, as described below, have shifted the importance of working plans. Third, the focus of much research on forests in India has been on the involvement of local people, and thus, has looked less at the technologies of governance in practice.

The working plan covers a forest division. It consists of 3 core parts: A description of the division and past management (including a critique of previous working plan prescriptions and an evaluation of their outcome), a prescription for management in the next 10 years, and a statistical appendix which contains detailed forest mensuration data as well as other data relevant to the management. Working plans are now subject to approval by the central government, and must follow the instructions in the National Working Plan Code (Government of India No date).

According to interviews with working plan officers, preparation of a working plan takes 4-5 years. The first step is a detailed forest mensuration exercise carried out by

---

[7] The Forest Department's is generally considered to be unwelcoming to researchers (Madhusudan et al. 2006; Shahabuddin 2010). In the case of the working plan this is particularly unfortunate since these contain a wealth of data that could be used by independent biological researchers, and might be substantially improved by exposure to external critique.

surveyors from the working plan office. A randomly selected sample of forest plots of 60x60 m are measured, with saplings measured on a 20x20m subplot. The aim is for a 1% sample of forest areas. Recently, this has been complemented by analysis of remote sensing data. Simultaneous with this work, the territorial officers of the forest division prepare a 1st Preliminary Working Plan Report, which is supposed to describe their experience implementing the current working plan, and offer suggestions for changes and improvements. The Working Plan office takes these two pieces – the forest data and the recommendations of the territorial officers implementing the plan – into account as it prepares a second preliminary working plan report, which offers a new prescription for forest management. Given the complicated nature of the data analysis involved, this can take 1-2 years. This second report then serves as the basis for discussions between the local territorial office, the working plan office, and their supervisors, who create a final draft which is submitted to the state and national governments for review. Most changes are made as the result of local discussions, not as the result of state and national review – officers who have been involved in recent working plan revisions report no major changes at this late stage.

The core of the working plan consists of a detailed proposal for future action on the forest, consisting of a series of "working circles" – specific treatment prescriptions that apply to specifically defined compartments and coupes. For example, forest compartments with good timber are typically assigned to a "Selection-cum-Improvement" working circle, which prescribes selected felling of trees of certain species at certain girth classes, and regeneration activities to improve the forests. By contrast, areas with little tree growth may be assigned to an "Afforestation" working circle, in which various regeneration activities are assigned, with no felling. Overlapping working circles may also be prescribed: for example, any area in any other circle that is suitable for bamboo planting or production may be assigned to a "bamboo overlapping working circle," while all or most of the forest may be assigned to a "wildlife habitat working circle" which may prescribe wildlife protection and the construction of water holes. In areas where felling is called for, the working plan will designate felling series: these indicate the specific areas which should be felled each year. Although these prescriptions leave substantial room for discretion in their implementation, they serve as an essential guide for Forest Department activities.

Working plans are notable for what they don't contain as much as for what they do contain. They contain no references to research, and they are not seen outside of the departmental hierarchy. The working plan officer, in collaboration with the territorial officers, makes his prescriptions based on analysis of past results by implementing officials, current forest mensuration, and his interpretations of national and state laws and policies. He does not have the benefit of the insights of other observers – researchers, local villagers, wildlife enthusiasts, and even members of other government departments, nor do these external stakeholders have any tools for insuring that the working plan is followed, nor for challenging aspects of the working plan that they disagree with. I can find no evidence that existing JFM microplans (see below) have been consulted or contribute in any way to the writing of working plans in Maharashtra.

5. IMPLEMENTING POLICY REFORMS

5.1 Recent Policy Changes and Reforms

In 1988, the Government of India issued a new forest policy which represented an about-face. Instead of emphasizing industrial activities, the 1988 policy emphasized conservation and the meeting of local needs (Ministry of Environment and Forests 1988). This was followed by a government circular (Ministry of Environment and Forests 1990) which encouraged the state Forest Departments to involve villagers in the management of forests near their villages. The resulting Joint Forest Management (JFM) programs, which drew on a history of successful experiments in several states (Joshi 1999, 2000; Shah 2001; Sarin 1993; 1989; Poffenberger and McGean 1996), drew large amounts of funding from international donors. In Maharashtra, the World Bank provided a large loan which funded the initial years of JFM, terminating in 2000 (Agricultural Operations Division 1991; The World Bank 2000). Subsequent funding for JFM projects in Maharashtra has come from a diversity of state and national programs.

A second set of changes in forest management were driven by a series of Supreme Court judgments in what has come to be known as the Godavarman Case (Nair 2005; Rosencranz, Boenig, and Dutta 2007; Thayyil 2009). These have impacted two primary areas: the diversion of forest lands to non-forest purposes and the operation of Working Plans. The Forest (Conservation) Act of 1980 ordered that no forest land be diverted from forest uses without permission from the central government and payment of money to take up compensatory afforestation and to compensate for the net present value of the land. The Supreme Court orders have interpreted the meaning of forest quite broadly, to include any land that is designated as forest in *any* government record, or that contains forest cover, regardless of its legal designation. In parts of Vidarbha, land that was nationalized from landlords after independence, and did not contain forest, was transferred to the Revenue Department, under the name Zudupi Jungle (literally translatable as Shrub Forest). Because these lands are designated as Jungles, they are now regulated by the Forest Department. Perhaps more significantly, a large amount of money accumulated by the Central Government for compensatory afforestation is now (i.e. starting in 2010) being released to the state forest departments, vastly increasing their resources (Ministry of Environment and Forests 2009, 2009, 2009).[8]

The orders in the Godavarman Case have also created a system of monitoring of timber harvests and working plan preparation. In short no felling of trees is permitted outside of that sanctioned in current working plans approved by the central government. Working Plans, which have been prepared since the late 19th or early 20th century in Vidarbha, are now required to follow a uniform code (Government of India), are subject to approval by both the state Forest Department and a central committee, and are required to be revised on a 10 year cycle. Each state is required to submit an annual plan to the central government indicating what felling and regeneration activities will be

---

[8] It is likely that in the near future, similar increases in funding will accompany the National Mission for A Green India (Ministry of Environment and Forests Government of India 2010) and similar programs to reduce atmospheric carbon dioxide i.e. under REDD (Phelps, Webb, and Agrawal 2010)

taken up in each division. In order to receive approval for felling activities, they must show that all felling is being done in compliance with the working plan, and that the area being regenerated exceeds the area being felled. These plans are checked at the end of the felling season, at which time the state governments are required to submit a second "Action Taken Report" to the central government. These orders have had the effect of increasing the importance of planning and creating a system of inter-governmental accountability where none had previously existed.

A final set of policy changes are the result of 3 laws enacted by the UPA Government in 2005, all of which aim to increase citizen control over the government. The National Rural Employment Guarantee Act requires the government to provide unskilled employment to any person who demands it on public works projects. Monies being made available through this program are being used to subsidize some forest works, however the impact of this program in Vidarbha are likely to be limited for two reasons: first, the program is modeled on a program that was begun in Maharashtra more than 20 years ago (Joshi 2010), so it is not new in this region. Second, the Forest Department's ability to use unskilled labor is highest during the monsoon, when labor is needed to plant trees, however this is also the season for planting crops, and so labor availability is limited. The Second new law is The Right To Information Act, which requires the government to make records publicly available. Again, an initial impression is that this law has so far had a limited effect on forest management in Vidarbha: forest officers do not appear to be aware of its provisions, and continue to treat important government documents as their private property. Furthermore, there appears to be no systematic method for archiving older documents, and I have found that 10 year old documents are often unlocatable.

The third law, the Forest Rights Act, aims to redress historical wrongs by allowing tribal people and "other traditional forest dwellers" to claim rights to forest land, either for cultivation or for the gathering of forest products. The process for reviewing these claims consciously limits the Forest Department's power: Claims are initially reviewed by the Gram Sabha (village assembly), and then by a sub-district and district level committee in which forest officials are members, along with representatives of the Tribal welfare department and the Revenue Department. Since it allows the gram sabha to claim community rights to collect and manage most NTFPs, this law represents a significant challenge to the Forest Department's power.

5.2 Implementing Policy Reforms

Of the three sets of reforms described above, JFM has received the vast majority of the attention from scholars (for a recent review of this literature see Springate-Baginski and Blaikie 2007). Forest officers are often blamed for the shortcomings of the program, and this observation has led a few scholars to survey forest department officials on their attitudes towards JFM (Matta 2003; Kumar and Kant 2005, 2006; Kumar, Kant, and Amburgey 2007; Matta, Kerr, and Chung 2005; Matta et al. 2005; Matta and Kerr 2007). Examining the implementation of other reforms gives insight into the implementation of JFM. What we see is that the personal opinions of officials, while important, are limited in their ability to explain variations in policy implementation. Personal opinions are shaped, as I have described above, by training and structures of incentives and patterns

of operation that officers are accustomed to. Personal opinions can have strong short-term impacts, but since officers are transferred very frequently, the spatial impact of the resulting heterogeneity is limited. Furthermore, policy implementation is shaped by patterns of interaction between different stakeholders that are institutionalized both in the rules of the reform and in existing practices.

5.2.1 The Godavarman Case

I will begin by examining the impact of the Godavarman case because in many ways the Supreme Court orders in the case have been the most effectively implemented. They have created a process which is effectively followed throughout the study region. Working plans are submitted and approved in accordance with a defined national code, and works are taken up in accordance with procedures for submitting proposals and action taken reports to the central government. Proposals for diversion of forest land for non-forest purpose have attracted great controversy in some parts of India recently, however these controversies have affected only a tiny percentage of the proposed diversions, most of which are non controversial, involving small areas (i.e. less than a hectare) which are needed for small infrastructure development projects.

The reforms resulting from the Godavarman case all enhance the power of actors who were already powerful within the existing political economy of forest management in Vidarbha. To begin with, these reforms enhance the upward accountability of senior forest managers towards both the head office in the state and the national government. Various reports have to be submitted by DCFs and CFs to the head office, and thence to the central government for approval. The procedures for approving the diversion of forest lands have enhanced the power of the Divisional forest officials to resist local political pressures to divert land for local developmental needs. There is a clear, but complicated and expensive, procedure that forest officials can point to when any other official or politician asks for forest land. Whether this is effective at protecting forest land, or simply enhances opportunities for bribery is still an open question.

These reforms are also consistent with the ideology of scientific forest management taught in the training academies. Forest lands are to be protected by these policies. No land should be diverted except through proper forms of rational planning – i.e. a complicated bureaucratic procedure which gives the appearance of avoiding politics. The importance of working plans – the supposedly scientific prescriptions which form the basis of the forest department's claim to rational planning – is enhanced, as the court ordered processes insure that all felling is done in compliance with working plans.

Finally, the end result of the process of forest diversion is to make large amounts of money available for the main money absorbing activities which the department is already familiar with: planting tree plantations. Since harvesting forest products – be it timber, bamboo, or NTFPs, is done by contractors, the department's primary technical capacity lies in creating tree plantations. That this is the most important technical activity done by the department itself is illustrated by the fact that up until 2006 the statewide evaluation unit's only regular task was to evaluate the success of a random sample of forest plantations. These evaluation reports indicate that the Forest Department is not particularly good at regenerating forest through plantations

(Maharasthra Forest Department 2006, 2009, 2010). Similarly, the two externally aided projects undertaken by the department – the 1980s social forestry project funded by the USAID and the 1990s World Bank funded Maharashtra Forestry Project – were basically viewed by the department (and the donors) as tree planting programs (Misra and Bhatty 1990; Agricultural Operations Division 1991; The World Bank 2000).

5.2.2 The Forest Rights Act

If the Godavarman orders were implemented effectively because they enhanced the power and prestige of the existing powers, the Forest Rights Act has enhanced actors with an effective ability to countervail the power of the forest department in rural areas. It is too early to see if this effort will result in effective implementation in Maharashtra – the implementation process in the state started slowly, and is only about half complete. It is clear that many forest officers disagree with the premises of the act, which emphasize historical injustice done to forest-dependent people by forest officials. However it is interesting to see that the empowered actors are not those who the act aimed to empower. As has been observed with "right to employment" programs elsewhere in India (Corbridge et al. 2005), village level actors are not aware of the rights created by the law except inasmuch as state actors actively seek to inform them of those rights.

Although the gram sabha has been legally empowered, it is the revenue department which has been able to enhance its power through implementing the Forest Rights Act. The revenue department and the forest department have a long-standing rivalry in many parts of India. During the British era, revenue was interested in increasing revenue from land-based taxes – and therefore in extending cultivation into forested areas, as well as permitting greater access to forest products for cultivators – while the Forest Department was interested in enhancing its revenue from timber harvest – and therefore in keeping cultivators out except inasmuch as they provided labor. These dynamics are playing out again in the implementation of the FRA. The enhancement of the Forest Department power through the Forest Conservation Act, and in particular the designation of Zudupi Jungle as forest, has troubled revenue officials, who feel responsible for local development. The Forest Conservation Act hinders their ability to pursue development projects, and the supreme court orders have resulted in the revenue department losing control over land that they had previously been theirs.

The result is that the revenue department, particularly in areas such as Gondia Division, where they have lost a large amount of Zudupi Jungle, is eager to implement the FRA to their maximal ability. Gram sabhas are institutions with limited power. This is both because they are granted little power in the constitution, and because they are composed primarily of members with a weak understanding of the political system. By contrast, the Revenue Department, like the forest department, has functional officers familiar with every village, as well as a large budget, and nominal control over forest department activities. Thus, to the extent that the Forest Rights Act has been effective in changing forest governance, it is due to the empowerment of players who have capacity, and not due to its emphasis on empowering the marginalized.

5.2.3 Joint Forest Management

What does all of this say for the most talked-about reform, Joint Forest Management? The implementation of JFM in Maharashtra is, according to both the Forest Department itself (Maharashtra Forest Department 2008, 2009, 2010) and independent scholars (Ghate 2008), highly patchy. On paper there are over 12000 JFM committees in the state of Maharashtra, but these evaluations show that most of these committees have never received funding from the government and never meet: they are on paper only. A second set of villages have received government funding for JFM projects, and therefore appeared to be active for a time, but have seen interest fall off after government funding disappeared.[9]   A final, much smaller set of villages, has seen continued successful collaboration between the Forest Department and villagers.

What is striking about the small number of long-term success stories is that nearly all include an important role for long-term leadership. Although the Forest Department functionaries play a key role in initiating JFM, they rarely play this long-term leadership role for two reasons: first, they are transferred too frequently to build long-term leadership in the community, and second, they have too many other responsibilities. The forrester who sits on the JFM committee is also responsible for protection, harvest, maintenance, and regeneration activities, as well as several other JFM committees in his territory. Long-term leaders may be members of the village or representatives of NGOs. Following the arguments presented above for Godavarman & FRA, I argue that what is crucial about these leaders is that they are people who are already empowered prior to the initiation of JFM – either NGOs or social workers or locals who possess similar skills and capabilities.

6. DISCUSSION & CONCLUSION

The argument that the preliminary evidence presented above leads me towards has strong echoes of the arguments presented in the recent book, *Seeing the State* (Corbridge et al. 2005). The authors argued that recent reforms had succeeded in opening up autonomous spaces for local action among the poor, but that this success was limited. In one village in Bihar, they found that a newly formed local school board was dominated by yadavs, a lower status caste that has been able to take advantage of their land ownership to improve their economic and political situation in recent years. By contrast, the local members of the scheduled castes had no interest in the village school, arguing that people like them would never be able to get the kinds of jobs which require schooling anyway. Similarly, we have seen that forest department governance reforms are effectively implemented when they bring benefits to people who are in a position to take advantage of them.

The ability of certain actors to affect changes in governance regimes is dependent on the powers they currently posses. Formal rights to information or forest land uses and strong legal frameworks that put JFM on a firm legal footing are not unimportant, but their exercise is limited. A villager who is not fluent in the technical language of science cannot effectively exercise his right to the information contained in the highly technical, English language working plan which governs how the forests around her village are

---

[9] Maharashtra has had various schemes over the years to fund "entry-point" activities in JFM villages. These have covered only a small percentage – perhaps a quarter – of the villages in the state.

managed. Nor is she likely to be able to go to court to challenge denial of those rights (for a revealing portrayal of the difficulties a Maharashtrian villager might have in challenging denial of legal rights, see Joshi 2010). This should not be misinterpreted as a critique of rights based approaches. Rather it is a critique of institutional reforms which ignore the different capacities and powers of the actors that will implement the policy.

If it is not enough to create new rights, how can the capacities and powers of disempowered actors – the poor, forest villagers, or even conservation interests – be empowered? This question is larger than the evidence in this paper, so I will confine myself to a few speculations. First, the evidence in this paper seems to suggest that the disempowered can be empowered when their interests are aligned with the interest of empowered actors. This is similar to arguments made by Corbridge et al. (2005) and Tendler (1997). While villagers are not able to critique working plans written in technical English, there are plenty of other actors in India who could critique these plans. If their interests were more closely aligned with villagers (because of economic ties between village level production and higher levels of business and engineering, for example), they might provide an effective check on Forest Department policies. I would also argue that the giving of rights – even if they cannot immediately be exercised – opens up the opportunity for actors to gain a sense of empowerment. Finally, empowerment requires education – not merely in the sense of schools and literacy, but also in the sense of teaching people how to interact with government processes that effect their lives.

WORKS CITED

Agrawal, Arun, Ashwini Chhatre, and Rebecca Hardin. 2008. Changing Governance of the World's Forests. *Science* 320 (5882):1460-1462.

Agricultural Operations Division, Country Department II, South Asia Regional Office,. 1991. Staff Appraisal Report: India: Maharashtra Forestry Project. Washington, DC: World Bank.

Aligica, Paul Dragos, and Peter J. Boettke. 2009. *Challenging Institutional Analysis and Development: The Bloomington School*. New York: Routledge.

Arnold, Gwen, and Forrest Fleischman. 2010. Institutional Analysis of the Role of Government Organizations in Managing Natural Resources. In *International Association for the Study of the Commons North America Regional Meeting*. Center for the Study of Institutional Diversity and the Consortium for Biosocial Complex Systems, Arizona State University, Tempe, Arizona, USA.

Banik, Dan. 2001. The Transfer Raj: Indian Civil Servants on the Move. *European Journal of Development Research* 13 (1):106.

Brady, Henry E., and David Collier, eds. 2004. *Rethinking Social Inquiry: Diverse Tools, Shared Standards*. New York: Rowman & Littlefield Publishers, Inc.

Brehm, John, and Scott Gates. 1997. *Working, shirking, and sabotage : bureaucratic response to a democratic public, Michigan studies in political analysis*. Ann Arbor: University of Michigan Press.

Cardenas, Juan Camilo, John Stranlund, and Cleve Willis. 2000. Local Environmental Control and Institutional Crowding-Out. *World Development* 28 (10):1719-1733.

Clark, T.W. 2002. *The policy process: A practical guide for natural resource professionals.* New Haven: Yale University Press.

Clary, David A. 1986. *Timber and the Forest Service*. Lawrence: University Press of Kansas.

Coleman, Eric A. 2009. Institutional factors affecting biophysical outcomes in forest management. *Journal of Policy Analysis and Management* 28 (1):122-146.

Corbridge, Stuart, Glyn Williams, Manoj Srivastava, and Rene Veron. 2005. *Seeing the state: governance and governmentality in India*. Cambridge; New York: Cambridge University Press.

Crawford, Sue E. S., and Elinor Ostrom. 1995. A Grammar of Institutions. *The American political science review* 89 (3):582-600.

Forest Survey of India. 2009. India: State of Forest Report. Dehradun: Ministry of Environment & Forests, Government of India.

General Administration Department. 2006. Maharashtra Government Servants Regulation of Transfers and Prevention of Delay in Discharge of Official Duties Act, 2005.

George, Alexander L., and Andrew Bennett. 2005. *Case studies and theory development in the social sciences*, *BCSIA studies in international security*. Cambridge, Mass.: MIT Press.

Ghate, Rucha. 2008. Lack Of Investment In Institution Building: A Major Lacuna of JFM In *"Governing Shared Resources: Connecting Local Experience to Global Challenges," 12th Biennial Conference of the International Association for the Study of Commons,* . Cheltenham, England.

Gibson, Clark C., John T. Williams, and Elinor Ostrom. 2005. Local Enforcement and Better Forests. *World Development* 33 (2):273-284.

Goodsell, Charles T. 2004. *The case for bureaucracy : a public administration polemic*. 4 ed. Washington, D.C.: CQ Press.

Government of India, Ministry of Environment and Forests. No date. National Working Plan Code. Ministry of Environment and Forests Government of India. New Delhi.

Government of India, Ministry of Personnel, Public Grievances and Pensions (Department of Personnel and Training),. 2007. the Indian Forest Service (Probationers Final Examination) Regulations, 2007. In *GSR 281(E)*, Ministry of Personel Government of India, Public Grievances and Pensions (Department of Personnel and Training),. Gazette of India, Extradinar, Part II, Section 3, Sub Section (i).

Iyer, Lakshmi, and Anandi Mani. 2008. The Transfer Raj :Political Change and Bureaucratic Turnover in India.

Joshi, Anuradha. 1999. Progressive Bureaucracy: An Oxymoron? The Case of Joint Forest Management in India. London: Rural Development Forestry Network, Overseas Development Institute (RDFN Network Paper No. 24a).

———. 2000. Roots of change: Front line workers and forest policy reform in West Bengal. Ph.D., Massachusetts Institute of Technology, United States -- Massachusetts.

———. 2010. Do Rights Work? Law, Activism, and the Employment Guarantee Scheme. *World Development* 38 (4):620-630.

Kaufman, Herbert. 1960. *The Forest Ranger: A Study in Administrative Behavior*. Washington D.C.: Resources for the Future.

King, Gary, Robert O. Keohane, and Sidney Verba. 1994. *Designing Social Inquiry: Scientific Inference in Qualitative Research*. Princeton, NJ: Princeton University Press.

Kumar, Sushil, and Shashi Kant. 2005. Bureaucracy and new management paradigms: modeling foresters' perceptions regarding community-based forest management in India. *Forest Policy and Economics* 7 (4):651-669.

———. 2006. Organizational resistance to participatory approaches in public agencies: an analysis of Forest Department's resistance to community-based forest management. *International public management journal* 9 (2):141.

Kumar, Sushil, Shashi Kant, and Terry L. Amburgey. 2007. Public Agencies and Collaborative Management Approaches: Examining Resistance Among Administrative Professionals. *Administration Society* 39 (5):569-610.

Lam, Wai, and Elinor Ostrom. 2010. Analyzing the dynamic complexity of development interventions: lessons from an irrigation experiment in Nepal. *Policy sciences* 43 (1):1-25.

Madhusudan, MD, K Shanker, A Kumar, C Mishra, A Sinha, R Arthur, A Datta, M Rangarajan, R Chellam, and G Shahabuddin. 2006. Science in the wilderness: the predicament of scientific research in India's wildlife reserves. *Current Science* 91 (8):1015-1019.

Maharashtra Forest Department, Evaluation Wing. 2008. EVALUATION OF JOINT FOREST MANAGEMENT: 2007 - 08 (SUMMARY OF OUTSOURCING & DEPARTMENTAL WORKING). edited by E. W. Maharashtra Forest Department. Nagpur.

———. 2009. EVALUATION OF JOINT FOREST MANAGEMENT: 2008 - 09 (SUMMARY OF OUTSOURCING & DEPARTMENTAL WORKING). edited by Evaluation Wing Maharashtra Forest Department. Nagpur.

———. 2010. EVALUATION OF JOINT FOREST MANAGEMENT: 2009-10 (SUMMARY OF WORK DONE IN 1ST AND 3RD YEAR JFM WORK). edited by Evaluation Wing Maharashtra Forest Department. Nagpur.

Maharasthra Forest Department, Evaluation Wing. 2006. THIRD YEAR EVALUATION REPORT- 2004 RAINS PLANTATION. edited by Evaluation Wing Maharashtra Forest Department. Nagpur.

———. 2009. EVALUATION REPORT FOR 2006 RAINS PLANTATION - THIRD YEAR PLANTATION EVALUATION. edited by Evaluation Wing Maharashtra Forest Department. Nagpur.

———. 2010. EVALUATION REPORT FOR 2007 RAINS PLANTATION - THIRD YEAR PLANTATION EVALUATION. edited by Evaluation Wing Maharashtra Forest Department. Nagpur.

Malhotra, K. C., and Mark Poffenberger. 1989. Forest Regeneration Through Community Protection: The West Bengal Experience: Proceedings of the Working Group Meeting on Forest Protection Committees Calcutta June 21-22, 1989. Paper read at Working Group Meeting on Forest Protection Committees, at Calcutta.

Matland, Richard E. 1995. Synthesizing the Implementation Literature: The Ambiguity-Conflict Model of Policy Implementation. *J Public Adm Res Theory* 5 (2):145-174.

Matta, Jagannadha, Janaki Alavalapati, John Kerr, and Evan Mercer. 2005. Agency Perspectives on Transition to Participatory Forest Management: A Case Study From Tamil Nadu, India. *Society & Natural Resources* 18 (10):859 - 870.

Matta, Jagannadha, and John Kerr. 2007. Barriers Beyond the Partners: Bureaucratic and Political Constraints to Implementing Joint Forest Management in Tamil Nadu, India. *Environment, Development and Sustainability* 9 (4):465-479.

Matta, Jagannadha Rao. 2003. Transition to participatory forest management in India : problems and prospects from the perspectives of foresters, Dept. of Resource Development, Michigan State University, Lansing, MI.

Matta, Jagannadha Rao, John Kerr, and Kimberly Chung. 2005. From Forest Regulation to Participatory Facilitation: Forest Employee Perspectives on Organizational Change and Transformation in India. *Journal of Environmental Planning & Management* 48 (4):475-490.

Miller, Gary J. 1992. *Managerial dilemmas : the political economy of hierarchy*, *The Political economy of institutions and decisions*. Cambridge [England]; New York: Cambridge University Press.

———. 2005. The Political Evolution of Principal-Agent Models. *Annual Review of Political Science* 8 (1):203-225.

Milne, Grant, Barbara Verardo, and Reena Gupta. 2005. India: Unlocking Opportunities for Forest-Dependent People in India. New Delhi The World Bank Agriculture and Rural Development Sector Unit, South Asia Region.

Ministry of Environment and Forests. 1988. National Forest Policy Resoultion, 1988. New Delhi: Ministry of Environment and Forests, Government of India.

———. 1990. Circular on Involvement of Village Communities and Voluntary Agencies for Regeneration of Degraded Forest Lands. New Delhi: Ministry of Environment and Forests 6-21/89-F.P.

Ministry of Environment and Forests, Government of India. 2009. CAMPA: WHAT THE SUPREME COURT ORDER OF JULY 10TH 2009 MEANS Ministry of Environment and Forests. Delhi.

———. 2009. The Guidelines on State Compensatory Afforestation Fund Management and Planning Authority (State CAMPA) Ministry of Environment and Forests. New Delhi.

———. 2009. The Guidelines on State Compensatory Afforestation Fund Management and Planning Authority (State CAMPA)

Ministry of Environment and Forests Government of India. 2010. National Mission for a Green India: Draft Mission Document Version 1.0. edited by Ministry of Environment and Forests. Delhi.

Misra, D.N., and Zarina Bhatty. 1990. Final Evaluation of Maharashtra Social Forestry Project. Washington, DC: United States Agency for International Development.

Nair, Manu. 2005. T.N. Godavarman V. Union of India - The Application of "Continuing Mandamus" as a Tool For Sustained Vigilance of Forest Conservation. *The International Environmental News*.

North, Douglass C. 1990. *Institutions, Institutional Change, and Economic Performance*. Edited by J. E. Alt and D. C. North, *The Political Economy of Institutions and Decisions*. New York, NY: Cambridge University Press.

O'Toole, Randal. 1988. *Reforming the Forest Service*. Covelo, CA: Island Press.

Office of the Chief Forest Statistician. 2009. Forest Department Annual Administration Report with Abridged Version of Annual Report on Silvicultural Research and Forest Utilisation Activities for the Year 2008-9. Nagpur: Maharashtra Forest Department, office of the Principle Chief Conservator of Forests,.

Ostrom, Elinor. 1992. *Crafting institutions for self-governing irrigation systems*. San Francisco, Calif.; Lanham, Md.: ICS Press ; Distributed to the trade by National Book Network.

———. 2005. *Understanding Institutional Diversity*. Princeton, NJ: Princeton University Press.

Ostrom, Elinor, and Harini Nagendra. 2007. Tenure alone is not sufficient: monitoring is essential. *Environmental Economics & Policy Studies* 8 (3):175-199.

Perry, J.L., and L.R Wise. 1990. The motivational bases of public service. *public Administration Review* 50 (3):367-373.

Perry, James L., and Annie Hondeghem. 2008. Building Theory and Empirical Evidence about Public Service Motivation. *International public management journal* 11 (1):3 - 12.

Phelps, Jacob, Edward L. Webb, and Arun Agrawal. 2010. Does REDD+ Threaten to Recentralize Forest Governance? *Science* 328:312-13.

Poffenberger, Mark, and Betsy McGean, eds. 1996. *Village Voices, Forest Choices: Joint Forest Management in India*. Delhi: Oxford University Press.

Potter, David C. 1987. IAS mobility patterns. *Indian Journal of Public Administration* 33 (4):845-856.

———. 1988. Mobility Patterns in State Government Departments in India'. *Indian Journal of Public Administration* 34 (3):907-32.

———. 1996. *India's Political Administrators: From ICS to IAS*. Delhi: Oxford University Press.

Rangarajan, Mahesh. 1996. *Fencing the Forest: Conservation and Ecological Change in India's Central Provinces 1860-1914*. Delhi: Oxford University Press.

Robbins, Paul. 2000. The rotten institution: corruption in natural resource management. *Political Geography* 19 (4):423-443.

Rosencranz, A, Edward Boenig, and Brinda Dutta. 2007. The Godavarman Case: The Indian Supreme Court's Breach of Constitutional Boundaries in Managing India's Forests. *Environmental Law Reporter* 37:100342-100042.

Sabatier, Paul A. 1986. Top-down and Bottom-up Approaches to Implementation Research: A Critical Analysis and Suggested Synthesis. *Journal of Public Policy* 6 (1):21-48.

Sarin, M. 1993. From Conflicts to Collaboration: Local Institutions to Joint Forest Management. New Delhi: Society for Promotion of Wasteland Development, Ford Foundation.

Shah, Anil C. 2001. Emergence of Joint Forest Management in India: A Journalistic Documentation. In *In the Hands of the People: Selected Papers of Anil C. Shah*, edited by S. Iyengar and I. Hirway. Ahmedabad: Gujarat Institute of Development Research.

Shahabuddin, Ghazala. 2010. *Conservation at the crossroads : science, society, and the future of India's wildlife*. Ranikhet; Bangalore: Permanent Black, in association with the New India Foundation ; Distributed by Orient Blackswan.

Springate-Baginski, Oliver, and Piers M. Blaikie. 2007. *Forests, people and power : the political ecology of reform in South Asia*, *Earthscan forestry library*. London; Sterling, VA: Earthscan.

Sunderlin, William D., Jeffrey Hatcher, and Megan Liddle. 2008. From Exclusion to Ownership? Challenges and Opportuniites in Advancing Forest Tenure Reform. Washington, DC: Rights and Resources Group.

Tendler, Judith. 1997. *Good government in the tropics*, *The Johns Hopkins studies in development*. Baltimore: Johns Hopkins University Press.

Thayyil, Naveen. 2009. Judicial fiats and contemporary enclosures. *Conservation and Society* 7 (4):268-282.

The World Bank. 2000. Implementation Completion Report (23280) on a Credit in the Amount of SDR 88.9 million to the Government of India for Maharashtra Forestry Project. Washington DC: The World Bank.

Theesfeld, Insa. 2004. Constraints on Collective Action in a Transitional Economy: The Case of Bulgaria's Irrigation Sector. *World Development* 32 (2):251-271.

———. 2008. Irrigation sector in Bulgaria: impact of post-socialist policy reforms. *Water Policy* 10 (4):375-389.

Tucker, C. M. 2010. Learning on Governance in Forest Ecosystems: Lessons from Recent Research. *International Journal of the Commons* 4 (2):687-706.

van Gool, Sebastiaan Maria. 2008. Untouchable bureaucracy : unrepresentative bureaucracy in a north Indian state, Department of Public Administration, Social and Behavioural Sciences, Leiden University, Leiden.

Vasan, Sudha. 2002. Ethnography of the Forest Guard: Contrasting Discourses, Conflicting Roles and Policy Implementation. *Economic and Political Weekly* 37 (40):4125-4133.

Vermillion, Douglas L. 1997. *Impacts of irrigation management transfer: A review of the evidence. Research Report 11.* Colombo, Sri Lanka: International Irrigation Management Institute.

———. 2006. Lessons learned and to be learned about irrigation management transfer. In *International Association for the Study of the Commons*. Bali, Indonesia.

Wade, Robert. 1982. The System of Administrative and Political Corruption: Canal Irrigation in South India. *Journal of Development Studies* 18 (3):287.

———. 1985. The market for public office: Why the Indian state is not better at development. *World Development* 13 (4):467-497.

Weber, Max. 1947. *The Theory of Social and Economic Organization, trans. A. M. Henderson and Talcott Parsons*. New York: The Free Press.

Williamson, Oliver E. 1985. *The economic institutions of capitalism : firms, markets, relational contracting*. New York; London: Free Press ; Collier Macmillan.

Zwart, Frank de. 1994. *The bureaucratic merry-go-round : manipulating the transfer of Indian civil servants*. [Amsterdam]: Amsterdam University Press.