Turning the Page in Forest Governance: Science and Bureaucracy

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Despite the legal provisions for the functioning of expert bodies like the National Board of Wildlife and the Forest Advisory Committee, the forest bureaucracy disdains the experts and often overrides scientific evaluations. The training course of the India Forest Service too lacks a social science component that can help new foresters understand the social ramifications of forest-related issues. It is time to create space for scientists and conservationists to liaise with the forest departments in the country.

A few months ago, three non-official members of the Forest Advisory Committee (FAC) wrote a letter to the minister of state for environment and forests. The letter spoke of the subversive actions of high-level forest department (FD) officials, who in blatant violation of the Forest (Conservation) Act, 1980 (FCA) withheld information and wilfully confused facts pertinent to several projects needing forest clearances (Sethi 2011). Public knowledge of the letter turned the spotlight of discomfort squarely on the state of governance in the forest department. They responded true to form by publicly slandering the academic credentials of the non-official members (Bahuguna 2011). Their offered solution is to weed out "non-professionals" (i e, independent scientists and academics), whom they consider an imposition on bureaucratic authority.

Fallacies of Governance

The real issue is inaccuracy of information and the lack of accountability of the forest department's administrative decisions. The department's public response to the non-official members' letter was that the non-officials had "narrow" expertise, and the fields of wildlife ecology, environmental history, conservation policy, and sociology were irrelevant in evaluating forest clearances. This in spite of the Supreme Court ruling (2007) that mandates such expertise during forest clearances. Such knee-jerk reactions smack of anachronisms of a bygone era of top-down management while, in spite of rigid state control, vast areas of forests have been cleared in the last few decades even within reserve forests and protected areas. The Centre for Science and Environment's (CSE) report on forest clearances documents these gargantuan conversions of forestland for industry, coal, and mineral mining (CSE 2011) and an article in this journal used the CSE data to highlight the ills that plague forest clearance (Correspondent 2011). Notwithstanding FCA (1980), the forest officials continue to act capriciously and accord arbitrary clearances. Often, the basis of clearances has not been made public. Importantly, the scientific grounds for clearance decisions are wanting.

Impediments

The three non-official experts in the FAC observe that even when a scientific evaluation is conducted, the predicted negative effects do not prevent forest officials from granting clearances – almost as if the process, and the law, did not matter (ibid). Similar allegations have also been made by members of the National Board for Wildlife (NBWL). The summary records of NBWL or FAC meetings do not detail the ecological basis and methods used to arrive at the effects of forest land diversion. Further, the Ministry of Environment and Forests (MOEF) website only provides titles of projects cleared, with no details of the process. With such poor and obscure documentation, right to information (RTI) queries are perhaps the only way for concerned citizens to obtain details and assess the adequacy of the clearance process. To worsen matters, now we have a group of ministers (GOM) that can take calls on clearance for developmental projects like coal mines (Chakravartty 2011).

In spite of legal provisions for bodies like the NBWL and the FAC, the forest bureaucracy relegates the role of scientists to the fringes, often overriding scientific evaluations (Bhargav and Dattatri 2011). The rationale behind having independent members in government bodies such as the FAC and NBWL is to create a much needed democratic space for public participation. They provide an additional level of expertise to evaluate the multiple dimensions of forest and wildlife issues that affect natural resources and our society. Instead, arbitrary decision-making and bureaucratic inertia against the high level of expertise and contemporary scientific training from members of academia is subverting transparency and making a parody of the democratic

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process (ibid) – present on paper but ineffective in practice.

Unlike a few decades ago, India now has a cadre of well-trained and highly competent wildlife scientists, largely outside the FD's confines. For instance, in the past five years, nearly 25% of all publications by Indian authors in international peer-reviewed journals have come from the theses of a single master's programme in wildlife biology and conservation, reflecting the growth of high-quality expertise in this field. For the government to not make use of this available expertise in solving complex problems is like sending the doctor on vacation during a plague epidemic.

Ecology Lags Behind in India

The current controversy regarding which science is "valid" or "necessary" is representative of the lack of respect for contemporary ecological science in the forest bureaucracy. An article by Madhusudhan et al (2006) in *Current Science* lucidly outlined the barriers posed by the forest bureaucracy to the practice of independent science from India's forests – the wildlife laboratories, which can help us understand the wildlife and the ecosystems we are trying to conserve. Five years later, researchers and conservationists are still battling the same issues. Change is at best slow and resistance very strong.

Globally, the science of understanding forests has long moved on from old-fashioned evaluation of timber yield and growth. The focus has shifted to ecological processes. The loss of a forest is not merely the number of cubic metres of timber lost, but the vital ecosystem links that are broken. When hydroelectric impoundments were created in Panama, the change in forest composition was part of a highly complex ecological process. The dam created islands where top predators became extinct, in turn, increasing densities of smaller animals like rodents and ants. Because these animals often destroy seeds and seedlings in forests, many plant species were wiped out and the forest changed drastically (Terborgh 2001).

There are various such studies that detail the cascading effects of habitat loss on wildlife and ecosystems. Such knowledge, however, is rarely taken into account while determining forest clearances and shoddy assessments remain the norm (Paliwal 2006). Over the past decades, it has been realised that the key idea behind protecting forests is not only the conservation of wildlife, but also the conservation of interactions between species and resulting processes. Furthermore, the biology of large-bodied "umbrella" species like the tiger, elephant, and rhino should form an integral part of assessing the losses due to forestland conversion, and the same goes for biology of habitat specialists like the river dolphin, forest owlet, and lion-tailed macaque. In addition to species biology, studies on ecological processes that are likely to be altered with disturbance have to be factored into the canvas of decision-making. Wildlife biology, ecology, and conservation science form the bedrock of knowledge for predicting the effects of forest clearance on vital processes like pollination, seed dispersal, and its cascading effects on issues such as water security and climate change. The latter issues are especially relevant to a developing country with an agrarian economy such as India.

Obsolete Training, Incumbent Resistance

Indian foresters, however, are primarily trained in forestry and silviculture, irrelevant to the conservation of our natural forests today.[1] Most scientific documentation by the FD is restricted to internal journals, thereby circumventing the international norms of independent peer review. Scientific expertise within the department is a far cry from the current standards of international wildlife research. Moreover, attempts to incorporate more relevant and accurate science into the system are met with strong resistance. A case in point is the famous example of an eminent tiger biologist being hounded for his disclosure of the FD's negligence resulting in tigers disappearing from the Panna Tiger Reserve (Chundawat 2009). Or, take the smear campaign against another renowned tiger biologist regarding the radio-collaring of tigers (Sukumar 1990). Often vicious, these campaigns are outrageous, factually flawed and without evidence, and indicate intolerance of criticism and debate.

The issue is not merely of forests and wildlife alone. Understanding the sociological impact of a forest clearance is as crucial as the ecological imperative. India also has many millions of people who are dependent on forests for their livelihoods. Diversion of forestland for industries, dams, or mines, irrevocably changes the relationship of these people with their environment. Many times, the loss of livelihoods is damaging. Yet, many in the forest bureaucracy steadfastly refuse to acknowledge the importance of sociological evaluations. The training course of the India Forest Service (IFS) lacks a social science component that can help new foresters understand the social ramifications of forest-related issues, and thus their disdain for public dialogue and participation. Trained in the doctrinaire manner of decision-making, they often do not implement fair public consultations with the affected local communities.

Need for Reform

The Indian public is clamouring for reform in governance, and accountability and transparency in administration. Meanwhile, the FD is trying hard to maintain its sole authority over decisions of forest clearances, through slander and intrigue. But forest officials are public servants working on taxpayers' money. No longer can they assume the authoritarian role, without being questioned. The systemic malfunction and levels of corruption are comparable to the better-known political scandals that currently occupy the country's column inches and airtime. Reform is not only necessary but mandatory.

There are several lessons to be drawn from the larger public debate on civil society participation in governance. The British raj style vertical hierarchy of the bureaucracy should be opened up for horizontal entry of qualified personnel based on merit, and at par with officers from the vertical tier. Independent experts will then have a better say in matters of forest governance, improve the quality of debate, and therefore its outcome. Presently, people from civil society are reduced to activists and observers, with no real role for science and academia. Inclusion of independent scientists and academics, during the training and probationary period of IFS officers will promote collaborations and engender a healthy respect for other specialisations.

The Importance of Collaboration

There are officials in the FD who in their individual capacities work closely with scientists, conservationists, and local people. Such an attitude is rare, and successful collaborations few. It is necessary to have a committed and outward looking "wildlife cadre" of young and enthusiastic IFS officers who are explicitly trained for wildlife conservation and willing to collaborate with scientists. The already overburdened FD must realise the impracticality of insularly juggling with governance, administration, and science. Their counterparts in developed (e g, the United States, United Kingdom) and even developing (e g, Nepal) countries, actively seek the help of scientists, thereby making timely and scientific management decisions. This facilitates better focus on vital administrative activities and more importantly, protection.

To illustrate the massive gains of external collaborations we need to learn from our neighbour, Nepal. Their department of national parks and wildlife conservation closely collaborates with a national non-governmental organisation (NGO), the National Trust for Nature Conservation, an international body the World Wildlife Fund and the Zoological Society of London, and others. One such successful collaborative example is the monitoring programme of the endangered one-horned rhino (DNPWC 2009). Based on the animal movement information collected by scientists, the department plans anti-poaching, and rescue operations when animals move beyond park boundaries. Such synergy has resulted in the recovery of rhino populations even during the recent civil insurgency.

Nepal actively facilitates research by numerous independent scientists on a range of issues with a tradition of active dialogue between government officials, NGOs and villagers living on the fringes of the park. For example, NGOs have helped people to shift to cultivation of cash crops which are not eaten by elephants and rhinos. This has not only increased agricultural revenue and decreased human-animal conflict, but has won the trust of local people who actively help in patrolling and creating awareness of wildlife issues. Instead of a top-down bureaucracy, such collaboration between villagers, scientists, and foresters works on multi-way knowledge transfer.

A Time for Change

It is time to discard the black boxes of bureaucracy and create space for scientists and conservationists to liaise with the FD in a consequential manner, not just from the sidelines. This arrangement will not in any way undermine the workings of the department, but can be used to forge a relationship where each party brings their expertise to the table. With more than 1.2 billion people, and huge pressures on wildlife and forests, India stands at a juncture where issues of forest governance can no longer be separated from modern science and sociology. An increasingly aware society is seeking answers to uncomfortable questions on forest governance, and justifiably so. Decision making will certainly be bettered by taking on board the proficiency and know-how of scientists and academics, and creating formal positions for collaboration. An important and essential change will be to ensure that the ecological evaluations and assessments of forest clearance

by such experts are not overridden by bureaucrats or politicians. The result might just be a brighter conservation future for India's wildlife and forests.

NOTES

1 The syllabus of Indian Forest Service trainees is spread thin over a variety of topics. The emphasis is on silviculture, forestry, botany and allied disciplines, and training in the philosophy and practice of ecology as a science is limited. Rigorous schooling in the fields of ecology, wildlife, and conservation biology requires a minimum of two years of Master's level training, often supplemented with a PhD in relevant specialisations. Lack of scientific capacity in the forest service is also prominent in the deficiency of peer-reviewed publications in international journals of repute. Formal training in social sciences for IFS trainees is also inadequate. The proposed revision to the syllabus does not include the Scheduled Tribes and Other Forest Dwellers (Recognition of Forest Rights) Act, 2006.
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