

Communal Property Rights and Depletion of Forests in Northern Pakistan†

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I. INTRODUCTION

This paper argues that the causes of rapid depletion of forests in Northern Pakistan are to be found not only in an extensive admission of open-ended communal property rights, but also an inadequate specification of those rights. Central to the problem are *guzara* forests. It is these forests for which property rights have, at best, been inadequately defined. It is true that at the time the rights in these forests were admitted in the last half of the past century, the prevailing conditions were vastly different, and the admission of rights did not seem to pose a serious conservation threat. As the rights became well-entrenched with the passage of time, the state has found it increasingly difficult to affect any changes in their structure for the sake of conservation. The equally important problem of inadequate specification of those rights has remained unnoticed.

The paper looks at the evolution of the forementioned rights in three adjacent forest divisions; Murree Kahuta (M-K) in the province of Punjab; and Haripur and Galis (H&G) in the North West Frontier Province (NWFP), that cover an important part of the lower watershed area of the rivers Indus and Jhelum. This account in Section IV of the paper, in the background of brief overviews of property rights in Pakistan's forests, and the theory of property rights in Sections II, and III respectively leads to certain policy relevant conclusions in Section V.

II. PROPERTY RIGHTS, AND FORESTS IN PAKISTAN: AN OVERVIEW

Most of the productive forests in Pakistan are encumbered with rights granted to the local inhabitants at the time of land settlement¹ in the last century. Depending on the kind and extent of rights these forests can be divided into two broad categories: (i) state (reserve), and (ii) communal (*guzara*). At places the state forests are subdivided into (i) reserve and (ii) protected classifications. Technically the reserve forests are the least encumbered; usually carrying only the rights of water, passage, grazing, and fuelwood collection. The protected forests, in addition, carry

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¹Settlement refers to officially recording the property rights in land.

the rights of fuelwood; lopping for fodder, and timber for house building,² agricultural implements, funerals, communal buildings like mosques, and graves. The situation with regard to the *guzara* forests is somewhat more precarious. The lands comprising these forests carry a curious mix of property rights as a result of a struggle between the state and local inhabitants, each trying to sway the distribution of rights in its own favour. The local inhabitants wanted private rights in land, which the state was unwilling to grant. This struggle led to an admission of extensive rights that included all of the foregoing, besides others that are discussed in Section IV below. In view of the future conservation contingencies, exercise of these rights was subjected to approval of the state, which reserved the rights to the trees of spontaneous growth. An effective enforcement of these rights turned out to be an illusive task. In the end these forests became a truly no man's land, suffering an indiscriminate exploitation.

III. THEORETICAL BACKGROUND

Two related strands of theory impinge on the problem under consideration. First, as pointed out by Demsetz (1967) in his seminal contribution, communal property rights give rise to what Hardin (1968) has called "the tragedy of the commons", where it is in an individual's self-interest to exploit the resource without any regard to the external costs his actions may impose on the others. The inevitable result is an over exploitation of the resource. The solution to this problem has traditionally been seen in an imposition of private property rights [see, for example, Ruthenberg *et al.* (1974); Picardi (1974); Davis (1971); and Johnson (1972)]. The empirical evidence presented in Glantz (1977), among others, however, suggests that such a privatization solution is too simplistic for diverse, traditional societies. Based on a distinction between common property, and a free and open access, made originally by Ciriacy-Wantrup and Bishop (1975); Runge (1981, 1986)³ has suggested an alternative to the conventional common property model in the form of a co-operation model that may be more useful in the present context.

Second, from the literature on externalities, and especially from Coase's (1960) pioneering contribution, it is clear that an unambiguous specification of property rights is a precondition for internalization of any externality. Different property right specifications may entail different transaction costs, particularly when these costs are defined broadly to include the enforcement costs as well. Any property rights specification which, for whatever reasons, could not be enforced

²For house building, each right-holder can claim three first class trees or between eight and fifteen inferior trees every five years. [See MHHPC (1958), p. 22].

³Also see, Ian Livingstone (1986).

(in other words, having a very high transaction cost), will perforce invite anarchism.⁴ For all practical purposes such specifications could be characterized as inadequate.

IV. EVOLUTION OF COMMUNAL RIGHTS

Prior to 1849,⁵ the year the British government took over the control of the area under consideration from the Sikhs, the property rights in land, to the extent they existed, were not fully recorded.⁶ The British government proceeded with the settlement of these areas on the assumption that all forest areas were state property. This process met with stiff resistance from the local inhabitants, who depended on these forests for their livelihood. The local inhabitants perceived the state as an adversary, that was usurping their genuine claims to land. There is some evidence to suggest that the resistance was comparatively stiffer in H&G divisions (NWFP), by virtue of it lying on the outer fringes of the Empire. For instance, we observe a relative leniency, both on account of the diversity of rights admitted as well as the extent of land area on which these rights were admitted, in NWFP as compared to Punjab.

As a result, at the time of settlement, large chunks of forest lands, usually surrounding the inhabited areas, were left out of settlement for communal needs. These were characterized as village wastelands, and subsequently came to be known as *guzara* forests. In Punjab, the framing of Waste Land Rules in 1855 started the process of land settlement in, along with the other areas, what has come to be known as the M-K forest division, which continued for the next thirty years or so. Initially the management of all the forests was entrusted to the civil administration. The management was officially transferred to the Forest Department immediately after its establishment in 1870. But exactly what areas fell under its jurisdictions remained ambiguous at the time. While the principle of *guzaras* was enunciated in the Waste Land Rules, it was not clear exactly what areas constituted these forests, presumably because of the disputations arising in the process of land settlement. Declaring certain areas as *guzara* forests required demarcation of reserve forests which did not occur till 1886. But this could be accomplished only by leaving certain disputed areas out of the reserve classification. In the following year these leftout areas were declared as *protected* forests [Murree Hills High Powered Commis-

⁴This, of course, would be true even if no externality was involved. The presence of an externality would confound the situation.

⁵Before mid 1840s all these areas formed part of the Kashmir *Durbar* (state).

⁶Although the picture on the whole is unclear, this much is clear that for some villages the rights in land were recorded in the official documents known as *wejab-ul-arz* (literally: land obligations) of the respective villages. The arabic origin of the word would seem to trace these to the Mogul Era. The British government, apparently, did not accord much recognition to these records.

sion, henceforth MHHPC, (1958)].⁷ These forests, as noted earlier, carried fairly extensive communal rights as compared to the reserve category, though not as extensive as the *guzara* forests. The picture with respect to the jurisdictional control of the Forest Department became clear at this time. Under local pressure, the management of the *guzara* forests was left with the civil administration (office of the Deputy Commissioner), which had neither the technical know-how nor sufficient personnel to manage these forests efficiently. Local inhabitants (the right-holders) saw an advantage in the lack of effective control on the part of civil administration.

The rules to regulate *guzara* forests were not framed until 1912. Up to that time the local inhabitants had a free hand in the exploitation of these forests. The new rules, without effecting any other rights, restricted each right-holder's house construction entitlements to a maximum of 315 cft. of timber once every three years.⁸ Even this burden would have proved unsustainable over time with the mounting population,⁹ but it is the inability to enforce these rights that led to a rapid deterioration of these forests. Thus as early as the end of the last century, with relatively low population pressure, we see the reports of denudation of these forests.¹⁰ By the mid 1930s the condition of these forests had deteriorated considerably. This prompted the Punjab government to set up a commission (Garbett Commission) to evaluate the situation and make appropriate recommendations.

The evolution of rights in the H&G forest divisions exhibits a similar pattern, particularly because the Punjab Waste Land Rules were also applicable to Hazara district. The demarcation between reserve and *guzara* forests did not start until 1882, and never got completed.¹¹ Under an 1884 regulation, the thus far demarcated

⁷The Report of the MHHPC (1958) notes: "Important and pure stands of forests, and forests in the upper watersheds of the hill streams were declared Reserve Forests with no rights except for water and way while the rest of the forests were constituted as protected forests partly because it was a quicker process involving much less labour for the settlement officer. . ." (p. 8, emphasis added).

⁸See Muhammad (1972). This Working Plan, like previous ones, points out that, "A large quantity of timber obtained by the right holders for house building from *Guzaras* is illicitly sold in the market" (p. 10).

⁹According to MHHPC (1958), the population of this area had doubled in the previous seventy years. Since that time the population of Pakistan has approximately doubled, and there is no reason to assume that it has not doubled again in the area under consideration.

¹⁰Robertson's Forest Settlement Report, 1887, records that "Many of the hill sides, especially in the Murree tehsil (an administrative subdivision) have been very much cleared for cultivation and the forests were in great danger of permanent injury, if not destruction", Government of Punjab, 1887.

¹¹In 1882 Mr Forrest, the Assistant Conservator of Forests, was deputed to demarcate the communal forests. One report describing this process reads, "The people, however, did not like demarcation and raised hue and cry in response to which Colonel Wace, the Junior Financial Commissioner of the Punjab paid a visit to the district . . . and recommended the abandonment of the demarcation. . .", [see Jan (1965), p. 42].

areas were declared as *Mahdooda* (restricted), in which cultivation was not permitted, while the undemarcated areas, permitting cultivation, were called *Ghair Mahdooda* (unrestricted).¹²

The right-holders enjoyed more or less unlimited rights in these forests. Apart from cultivation, even commercial felling was allowed against payment of a nominal fee. Besides all the rights noted earlier trees could also be cut to liquidate debts, and for education of children. The indiscriminate exploitation of these forests had another serious dimension in the Hazara district. The area comprising the *guzara* forests was relatively large. For instance, in the M-K forest division, out of a total area of 291,357 acres, 73 percent was under forests, and *guzara* forests constituted 48 percent of the forest area [MHHP, (1958), p. 11]. The comparable proportions in H&G forest divisions are 70 percent and 60 percent; and 84 percent and 70 percent respectively.¹³

Another indicator of the conflict between the state and local populace is provided by the lack of success, to date, to fully mark the boundaries separating *guzara* from the other forests, starting with the Forrest episode noted earlier (see n. 11) to the latest attempt in 1953-54.¹⁴ The situation in M-K forest division is not any different.¹⁵ Lack of an effective control is also manifested in an illegal annexation of, and encroachment on, both the *guzara* and state forests, protected as well as reserve.¹⁶ Furthermore, there has been pressure, resisted most of the times, but not always, to distribute the *guzara* lands to the right-holders.¹⁷

¹²Disputations on these demarcations continued. Finally, in 1911, as a result of the second settlement of the district in 1904-05, the demarcated area was reduced from 150,000 acres to 83,782 acres.

¹³Haripur forest division has a total area of 343,155 acres, while the total area of Galis forest division is 162,182 acres. [See Jan (1965), p. 30 and Nazir and Rafique (1974), p. 76].

¹⁴[See Jan (1965), p. 13]. With regard to the demarcation of *guzara* forests in Hazara district, that led to a distinction between *Mahdooda* and *Ghair Mahdooda* lands, Jan notes, "The boundary pillars . . . , ultimately disappeared due to lack of subsequent repairs with the result that now the demarcation lines remain only on . . . map," (p. 45).

¹⁵On the state of boundaries in Murree-Kahuta forest division [Ahmad (1959), p. 9] records that, "In several forests . . . the . . . boundary pillars were found missing and there was no clearly defined boundary line", and that " . . . the 5 year boundary checking programme was not carried out in full . . . The settlement although anticipated in 1940-41, according to the remarks in the control form, had not commenced until 1952". The settlement that started in 1952 was completed in 1957-58. A later report [Muhammad (1972), p. 11] is equally strong in noting that, "the Reserved and Protected Forests were not even touched by the Settlement Officer".

¹⁶According to [Muhammad (1972), p. 12], "the forest department was not adequately represented in the current settlement and the settlement officer has shown the encroachments in the reserved and protected forests as nautors in *guzara* forests". Nautor, as far as I can discern, refers to breaking up of *guzara* lands for cultivation purposes. A 1958 estimate of illicit nautor in only Murree Kahuta forest division is 15,000 acres. [See MHHP (1958), p. 25].

¹⁷In the M-K forest division such partition last occurred in Dewal *zail* (area comprising a few villages) in 1936. [See MHHP (1958), p. 25].

As the *guzara* forests steadily disappeared, pressure on the remaining forests understandably increased. Thus by 1920-21 all the reserve forests were opened up for grazing¹⁸ and lopping, effecting not only their regeneration adversely, but also leading to an increasing incidence of illicit felling, and the problem of torchwood.¹⁹ This resulted in a gradual deterioration of the state forests; a process still unfolding. Two subsequent developments are especially noteworthy, though neither has helped much to alleviate the problem for quite different reasons. One of these is the transfer of management of *guzara* forests to the respective Forest Departments, nominally in Punjab, and fully in NWFP. The second involved an institutional change. This was the experiment, in Punjab, with the institution of cooperatives.

In Punjab, the Garbett Commission made a number of recommendations, one of which was to transfer the control of *guzara* forests to the Forest Department for scientific management. Again, this could not be accomplished due to the opposition of right-holders. As a compromise, expertise of the Forest Department was extended to the civil administration in 1940, leading to a situation of dual control, further confounding their already deteriorated condition. Besides, given the objective conditions, it is doubtful if a complete transfer of control to the Forest Department would have led to an improvement as evidenced by later developments in NWFP. In NWFP the control was fully transferred to the Forest Department ten years later. The Hazara Management of Waste Lands Rules, 1950, vested all the powers of civil administration in the office of the Conservator of Forests. This, however, proved to be a cosmetic change only. One internal report of the Department [Jan (1965), p. 50] admits, "With this arrangement almost all defects of past managements were eliminated. The *guzaras* however, received a considerable setback in the form of *heavy felling for sales*" (emphasis added).

The second development represented an institutional change, and was, at least potentially, more important. This was the formation, in Punjab, of *guzara* cooperative societies. This happened somewhere in the Forties, as an alternative to the *panchayat*²⁰ system recommended by the Garbett Commission. The resulting involvement of right-holders in management, by transferring the property rights in the trees of spontaneous growth to the respective communities, would render *guzara* forests truly communal forests. For common property problems, some of the recent theoretical contributions favour such a cooperative type of solution to the conventional one of privatization.

¹⁸The regulations did provide for closure of certain areas to grazing for regeneration purposes, but no more than ¼th of the total area could be closed at a given time.

¹⁹More or less every report identifies these as serious problems. Torchwood refers to hacking out a resinous part of the stem of the mature chir (*Pinus Longifolia*) trees.

²⁰A *panchayat* is an assembly of village elders that has traditionally resolved the local disputes.

The private-property-rights solution for internalization of common property externality, for one, assumes open access (completely unrestricted entry). As a result, the individual cost functions are assumed separable in their arguments. This makes the common property problem akin to the famous "Prisoner's Dilemma" where the dominant individual strategy is to defect, or, in the present context, over-exploit the resource. The conventional solution also disregards insurance that common property may provide to the individual members. [Runge (1986), p. 625] has emphasised that, "In the face of the uncertainty characteristic of life in a developing economy, no individual can be assured that he or she will be spared failure", and that "common property institutions may be innovated which, rather than emphasize the right to exclude, provide for the right to be equally included as a hedge against these uncertain prospects".

Runge's cooperation model of common property, incorporating the two above-mentioned points, would seem to fit the *guzara* forests quite well, especially those in the M-K forest division after the institution of cooperative management in the 1940s. These forests did not represent a situation of unrestricted access, and in the economic climate of the time, if not now, were the mainstay of the local economy.²¹ Yet the institution of cooperative management failed to halt the deterioration of these forests. However, it is important to note that the cooperative institutions were never given a chance to function. This is quite clear from the report of [MHPC (1958), p. 24] which reads that these societies, "have never been consulted on any topic. The question of rights have never been referred to them. Societies have not been allowed to build up funds and the village *Guzaras* fund has never been placed at their disposal . . ." (p. 24).

Notwithstanding the strong recommendation of the Commission, the cooperative societies' (there were 18 such societies at the time the Commission submitted its report) structure have been allowed to degenerate into a "*Guzara* Forest Advisory Committee" in the subsequent years. Members to this advisory committee (ten in number) are *nominated by the government*. The administration, it seems, has been unwilling to give up the control of *guzara* forests, regardless of whether it was able to exercise that control effectively. It has neither been able to abolish the communal rights in land, nor able to enforce its own rights (in the trees of spontaneous growth), with the end result that these forests have, more or less, disappeared. It would be interesting to see if the recently instituted cooperative arrangement in NWFP will fare any better than it did in Punjab.

²¹Since then the building of new capital, Islamabad, about thirty miles away in the 1960s has improved the economic conditions considerably.

V. CONCLUDING OBSERVATIONS

From the preceding discussion, it is fairly clear that the *guzara* forests cannot carry the existing burden of rights. Such rights need to be capped, if not completely truncated, to a sustainable level. In the areas that have become completely denuded, the rights are already in abeyance, and thus stand truncated for all practical purposes. Since natural regeneration will take a considerably long period of time, a vigorous effort on part of the government would be required to accelerate the process. In the meantime, pressure on the remaining forests is bound to increase even more, requiring increased vigilance. Although forests fall under provincial jurisdiction, the federal government's financial cooperation would seem necessary not only because the expenditures involved may strain the generally limited provincial resources, but also because of the fact that a substantial proportion of the resulting benefits, not unlike the harm as a result of denudation previously, would accrue to the whole country.

If the rights cannot be completely abolished, as would seem to be the case if history is any guide, successful regeneration would require the cooperation of local inhabitants, be this in the form of the *panchayat* system (which would seem to suit the local genius), or cooperatives, or any other novel institutional arrangement. One advantage of active local participation, being self-regulatory in nature, is the reduced enforcement costs. The additional benefit may be a change in the local attitude towards the forests, which at the moment is, at best, one of apathy. One function of the state, in the circumstances, is to help the process of regeneration by providing the necessary services, including, among others, tree planting, educating the local inhabitants, and technical help. More than that, whichever institutional arrangement is adopted, the resulting allocation of property rights must be enforced efficiently, failing which, no institutional arrangement could be effective.

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